# CMT-ED2/ED2U

# SERVICE MANUAL

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

- CMT-ED2/ED2U is composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to it.

### COMPONENT MODEL NAME FOR CMT-ED2/ED2U

| | EXCEPT US, CND | US, CND |
|---|---|---|
| COMPACT DISC DECK RECEIVER SYSTEM | HCD-ED2 | |
| SPEAKER SYSTEM | SS-CED2 | SS-CED2U |

•Abbreviation
CND: Canadian model
MY : Malaysia model
SP : Singapore model
HK : Hong Kong model
AUS : Australian model
KR : Korea model
TW : Taiwan model

## SPECIFICATIONS

**General**

Power requirements
North American model: 120 V AC, 60 Hz
European model: 230 V AC, 50/60 Hz
Other models: 110 - 120 V or 220 - 240 V AC, 50/60 Hz
Adjustable with voltage selector
Power consumption 55W

**Supplied accessories**

Remote Commander (1)
AM bar antenna (1)
FM wire antenna (1)
Batteries (2)
Speaker grilles (2)
Screws (For attaching the speakers) (4)

Design and specifications are subject to change without notice.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

## PARTS LIST

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ********** | |
| | 1-418-635-11 | COMMANDER, STANDARD (RM-SED2) | |
| ⚠ | 1-569-008-11 | ADAPTER, CONVERSION (2P) (MY,SP,KR) | |
| | 1-791-962-11 | ANTENNA (FM) (EXCEPT US,CND) | |
| | 1-792-027-11 | ANTENNA (FM) (US,CND) | |
| | 3-867-342-11 | MANUAL, INSTRUCTION (ENGLISH) | |
| | 3-867-342-21 | MANUAL, INSTRUCTION (FRENCH,SPANISH) | (US,CND,AEP,MY,SP,KR) |
| | 3-867-342-31 | MANUAL, INSTRUCTION (ITALIAN,PORTUGUESE) | (AEP) |
| | 3-867-342-41 | MANUAL, INSTRUCTION (GERMAN,DUTCH) (AEP) | |
| | 3-867-342-51 | MANUAL, INSTRUCTION (SWEDISH,FINNISH, | DANISH) (AEP) |
| | 3-867-342-61 | MANUAL, INSTRUCTION (CHINESE) (TW,HK) | |
| | 3-867-342-71 | MANUAL, INSTRUCTION (POLISH,RUSSIAN) (AEP) | |
| | 4-993-348-01 | COVER, BATTERY (FOR RM-SED2) | |
| | X-4952-476-1 | GRILLE FRAME ASSY (YELLOW) (AEP) | |
| | X-4949-451-1 | AM ANT SUB ASSY | |
| | X-4952-593-1 | GRILLE FRAME ASSY (GRAY) (US,CND) | |

## MICRO HiFi COMPONENT SYSTEM

SONY®

MICROFILM

**9-929-021-11**
**(SP)**

**Sony Corporation**
**Home Audio Company**

99H001688-1
Printed in Japan ©1999.8
**Published by Quality Assurance Dept.**

# HCD-ED2

# SERVICE MANUAL

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

HCD-ED2 is the tuner, deck, CD and amplifier section in CMT-ED2.

This system is equipped with the Dolby* B-type noise reduction system.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

| | | |
|---|---|---|
| CD SECTION | Model Name Using Similar Mechanism | NEW |
| | Mechanism Type | CDM-61 |
| | Base Unit Type | KSM-331AAN/K1NP |
| | Optical Pick-up Type | KSS-331A (RP) |
| TAPE DECK SECTION | Model Name Using Similar Mechanism | NEW |
| | Tape Transport Mechanism Type | CMAL1Z025A |

## SPECIFICATIONS

### Amplifier section

**For the U.S. model**

**AUDIO POWER SPECIFICATIONS**

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads both channels driven, from 90 - 15,000 Hz; rated 15 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

North American model:

Continuous RMS power output (reference):
17 + 17 W
(8 ohms at 1 kHz, 10% THD)

European model:

DIN power output (rated): 15 + 15 W
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference):
17 + 17 W
(8 ohms at 1 kHz, 10% THD)

Music power output (reference):
35 + 35 W

Other models:

The following measured at 230 V AC, 60 Hz

DIN power output (rated): 15 + 15 W
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference):
17 + 17 W
(8 ohms at 1 kHz, 10% THD)

Inputs

MD IN (phono jacks): Sensitivity 1,000 mV, impedance 47 kilohms

Outputs

MD OUT (phono jacks): Sensitivity 500 mV, impedance 1 kilohm

CD DIGITAL OUT OPTICAL:
Optical

PHONES (stereo phone jack):
Accepts headphones with an impedance of 8 ohms or more

SPEAKER: Accepts Impedance of 8 to 16 ohms

### CD player section

| | |
|---|---|
| System | Compact disc and digital audio system |
| Laser | Semiconductor laser ($\lambda$ = 780 nm)<br>Emission duration: continuous |
| Laser output | MAX 44.6 $\mu$W*<br>* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture. |
| Wavelength | 780 - 790 nm |
| Frequency response | 2 Hz - 20 kHz (±0.5 dB) |

### Tape player section

| | |
|---|---|
| Recording system | 4-track 2-channel stereo |
| Frequency response (DOLBY NR OFF) | 50 - 13,000 Hz (±3 dB), using a Sony TYPE I cassette<br>50 - 14,000 Hz (±3 dB), using a Sony TYPE II cassette |
| Wow and flutter | ±0.15% W. Peak (IEC)<br>0.1% W. RMS (NAB)<br>±0.2% W. Peak (DIN) |

**— Continued on next page —**

## COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

## Tuner section

FM stereo, FM/AM superheterodyne tuner

### FM tuner section

| | |
|---|---|
| Tuning range | |
| North American model: | 87.5 - 108.0 MHz (100-kHz step) |
| Other models: | 87.5 - 108.0 MHz (50-kHz step) |
| Antenna | FM wire antenna |
| Antenna terminals | 75 ohms unbalanced |
| Intermediate frequency | 10.7 MHz |

### AM tuner section

| | |
|---|---|
| Tuning range | |
| North American model: | 530 - 1,710 kHz (with the tuning interval set at 10 kHz)<br>531 - 1,710 kHz (with the tuning interval set at 9 kHz) |
| European model: | 531 - 1,602 kHz (with the tuning interval set at 9 kHz) |
| Other models: | 530 - 1,710 kHz (with the tuning interval set at 10 kHz)<br>531 - 1,602 kHz (with the tuning interval set at 9 kHz) |
| Antenna | AM bar antenna, external antenna terminal |
| Intermediate frequency | 450 kHz |

## General

| | |
|---|---|
| Power requirements | |
| North American model: | 120 V AC, 60 Hz |
| European model: | 230 V AC, 50/60 Hz |
| Other models: | 110 - 120 V or 220 - 240 V AC, 50/60 Hz<br>Adjustable with voltage selector |
| Power consumption | 55 W |
| Dimensions (w/h/d) | Approx. 130 × 212 × 240 mm ($5 \times 8\ ^1/_2 \times 9\ ^1/_2$ in) incl. projecting parts and controls |
| Mass | Approx. 4 kg (8 lb 13 oz) |

Design and specifications are subject to change without notice.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

This caution label is located inside the unit.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

**SAFETY-RELATED COMPONENT WARNING !!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

### To change the AM tuning interval (not applicable on the European model)

The AM tuning interval is factory-preset to 9 kHz (or 10 kHz on North American model). To switch the AM tuning interval, tune in any AM station first, then turn off the system. Pressing TUNE + on the unit down, turn the system back on. When you change the interval, all the AM preset stations are erased. To change back to the original interval, repeat the same procedure.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE

The AC leakage from any exposed metal part to earth Ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

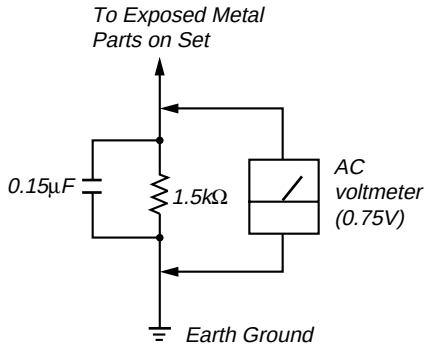


***Fig. A. Using an AC voltmeter to check AC leakage.***

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output several times.

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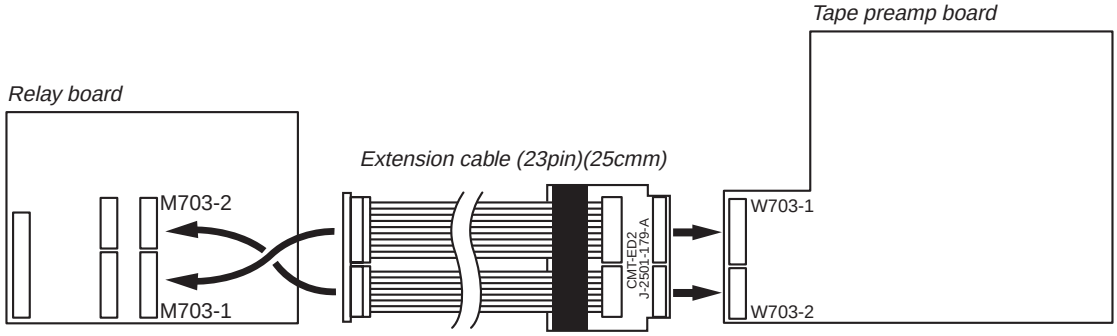
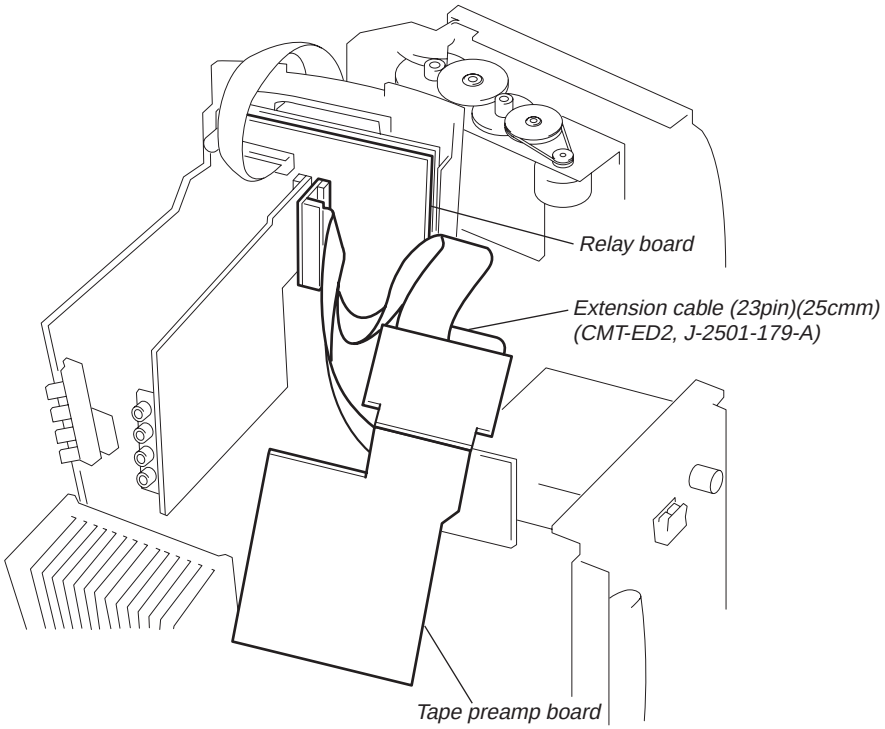
# SECTION 1
# SERVICING NOTE

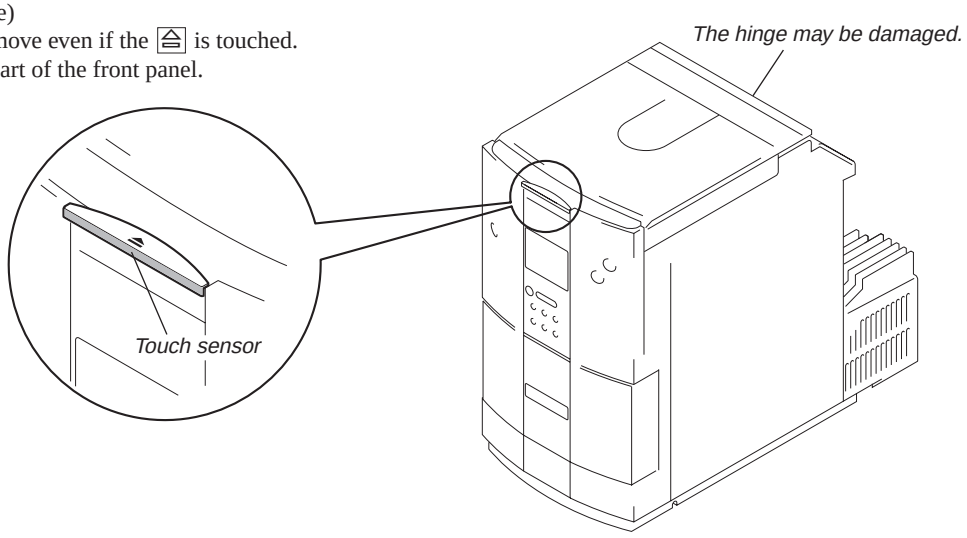
**Connectiong the extension cable (CMT-ED2)**



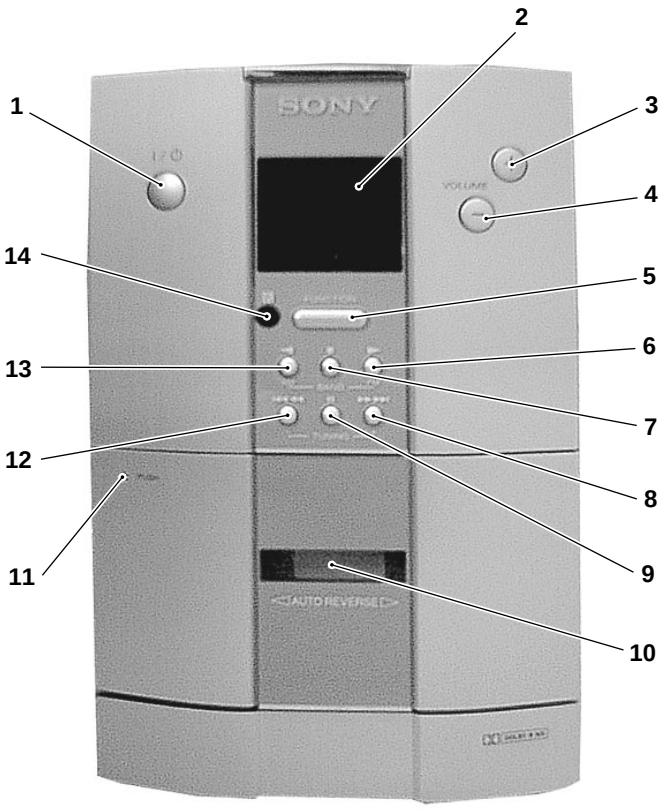

**CD LID**

The CD lid of this unit is opened and closed electrically.
Opening or closing the CD lid with force when the power plug is not connected to the outlet or the power is OFF may damage the hinge.
When servicing the unit, open and close the lid by touch the ⏏ button. (metal side)
The lid does not move even if the ⏏ is touched.
Touch the metal part of the front panel.



# SECTION 2
# GENERAL

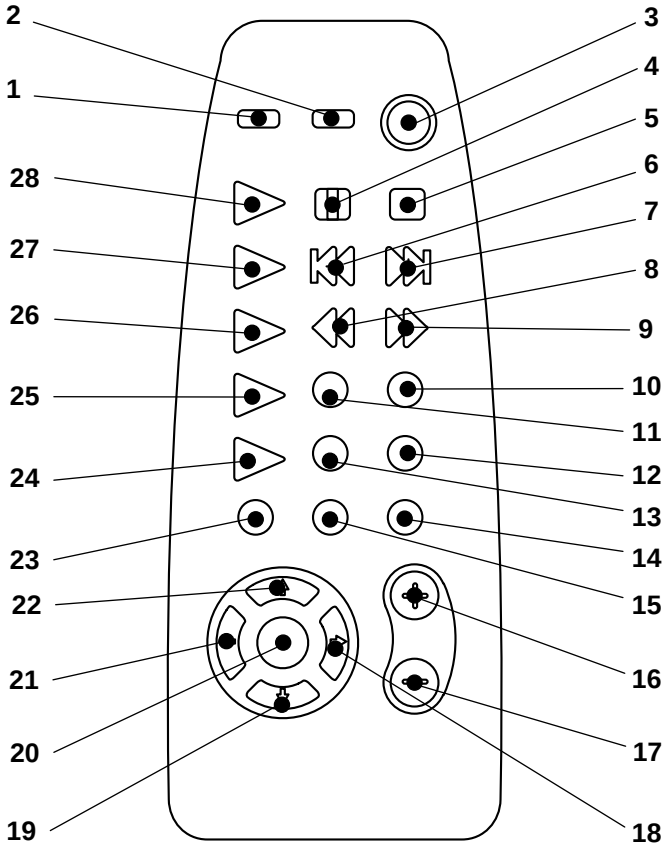
**Front Panel**




## LOCATION OF PARTS AND CONTROLS

**1** I/⏻ (Power) switch
**2** Display window
**3** VOLUME + button
**4** VOLUME - button
**5** FUNCTION
**6** ► button
**7** ■ (stop) button
**8** ►► ►►I + button
**9** ❚❚ button
**10** DECK Lid
**11** ⏏ Push
**12** I◄◄ ◄◄ - button
**13** ◄ button
**14** Remote sensor

**REMOTE**




**1** OPEN/CLOSE button
**2** DISPLAY button
**3** I/⏻ (power) switch
**4** ❚❚ (pause) button
**5** □ (stop) button
**6** I◄◄ (AMS*) TUNING - button
**7** ►►I (AMS*) TUNING + button
**8** ◄◄ button
**9** ►► button
**10** ● REC button
**11** DOLBY NR button
**12** SURROUND button
**13** TUNING MODE button
**14** DSG button
**15** STEREO/MONO button
**16** VOLUME + button
**17** VOLUME - button
**18** TIMER SELECT button
**19** SLEEP button
**20** ENTER button
**21** TIMER SET button
**22** MEMORY button
**23** CD REPEAT button
**24** PLAY MODE button
**25** DIR MODE button
**26** TAPE ◄► button
**27** TUNER/BAND button
**28** CD ► button

* AMS is the abbreviation for Automatic Music Sensor.

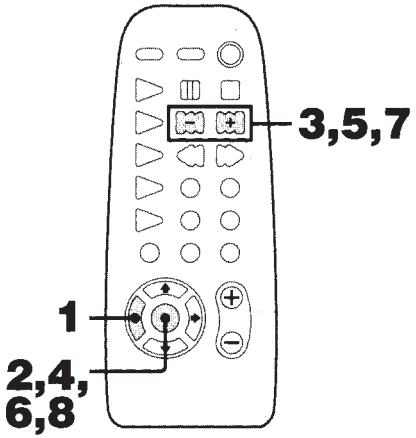
This section is extracted from instruction manual.

# Step 2: Setting the time

Before you can use the system's timer functions, set the internal clock.

The clock uses a 24-hour system on the European model, and a 12-hour system on other models.

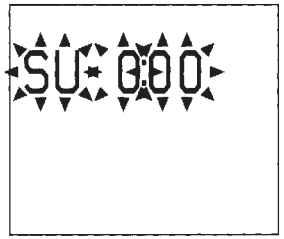
The 24-hour system is used here for illustration purposes.




**1** Press TIMER SET.

The clock on the display begins to flash.

When "DAILY" or "⏲ REC" appears, press ⏮/⏭ repeatedly until it disappears.




**2** Press ENTER.

The day of the week indication flashes.

**3** Press ⏮/⏭ repeatedly to set the day of the week.

**4** Press ENTER.

The hour indication flashes.

**5** Press ⏮/⏭ repeatedly to set the hour.

**6** Press ENTER.

The minute indication flashes.

**7** Press ⏮/⏭ repeatedly to set the minute.

**8** Press ENTER.

The clock will begin operating.

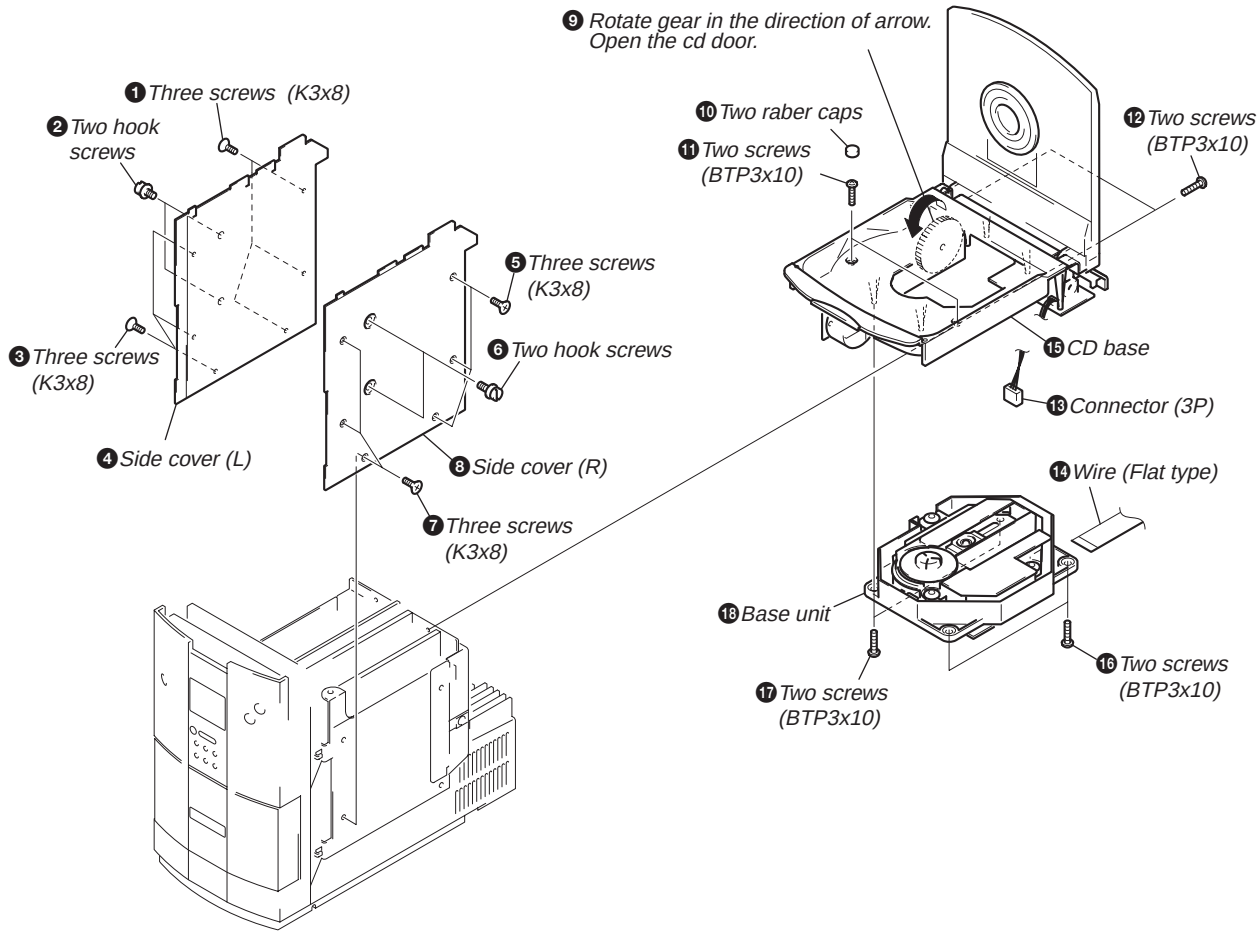
**Tip**

If you make a mistake, start over from step 1.

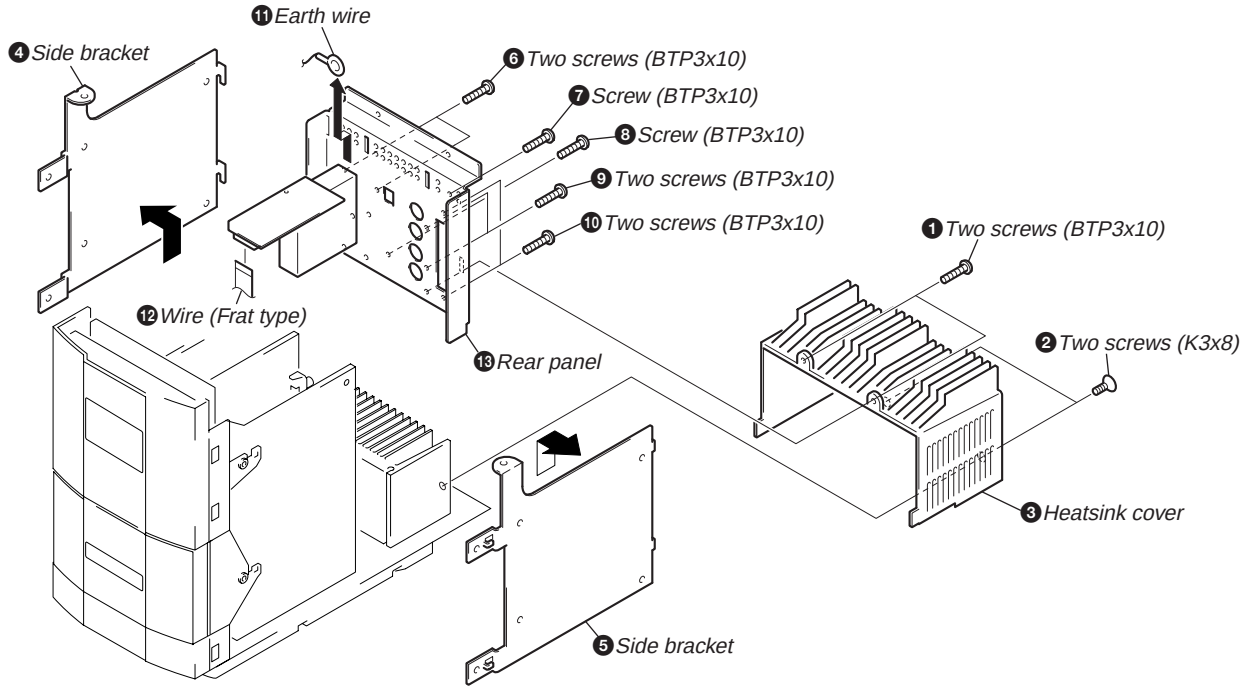
# SECTION 3
# DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

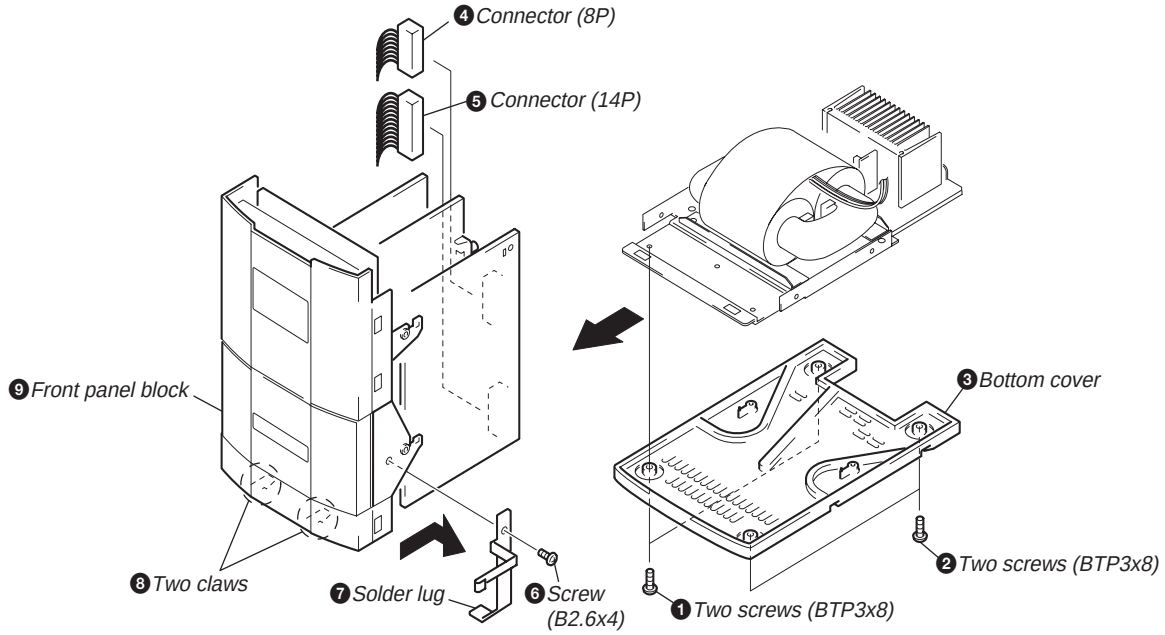
## 3-1. CD BASE AND BASE UNIT


❶ Three screws (K3x8)
❷ Two hook screws
❸ Three screws (K3x8)
❹ Side cover (L)
❺ Three screws (K3x8)
❻ Two hook screws
❼ Three screws (K3x8)
❽ Side cover (R)
❾ Rotate gear in the direction of arrow. Open the cd door.
❿ Two raber caps
⓫ Two screws (BTP3x10)
⓬ Two screws (BTP3x10)
⓭ Connector (3P)
⓮ Wire (Flat type)
⓯ CD base
⓰ Two screws (BTP3x10)
⓱ Two screws (BTP3x10)
⓲ Base unit

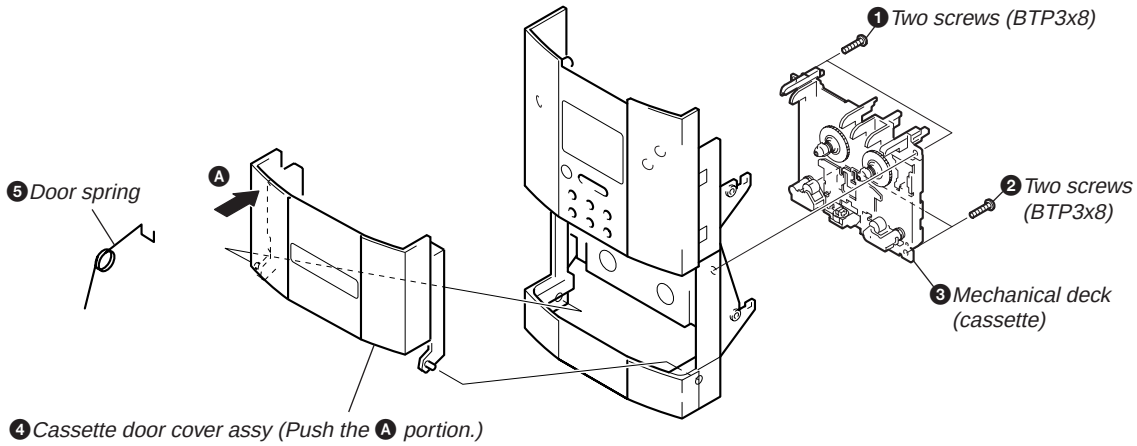
## 3-2. REAR PANEL



### 3-3. BOTTOM COVER AND FRONT PANEL




### 3-4. DOOR COVER AND MECHANICAL (CASSETTE)


❶ Two screws (BTP3x8)
❺ Door spring
Ⓐ
❷ Two screws (BTP3x8)
❸ Mechanical deck (cassette)
❹ Cassette door cover assy (Push the Ⓐ portion.)

# SECTION 4
# MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab :
   record/playback heads — pinch rollers
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

| Mode | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-102C | 28 to 71g • cm (0.39 – 0.99 oz • inch) |
| FWD back tension | CQ-102C | 1 to 7g • cm (0.01 – 0.10 oz • inch) |
| REV | CQ-102RC | 28 to 71g • cm (0.39 – 0.99 oz • inch) |
| REV back tension | CQ-102RC | 1 to 7g • cm (0.01 – 0.10 oz • inch) |
| FF/REW | CQ-201B | 56 to 122g • cm (0.78 – 1.69 oz • inch) |
| FWD tension | CQ-403A | 100g or more (3.53 oz or more) |
| REV tension | CQ-403R | 100g or more (3.53 oz or more) |

# SECTION 5
# ELECTRICAL ADJUSTMENTS

**DECK SECTION** | **0 dB=0.775V**

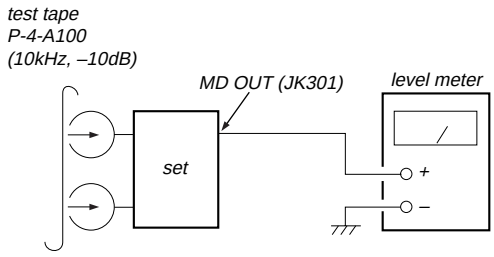
1. Demagnetize the record/playback head with a head damagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-ch.
7. Switches and controls should be set as follows unless otherwise specified.

| Tape | Signal | Used for |
|---|---|---|
| P-4-A100 | 10 kHz, –10 dB | Azimuth Adjustment |
| WS-48B | 3 kHz, 0 dB | Tape Speed Adjustment |
| P-4-L300 | 315 Hz, 0 dB | Level Adjustment |

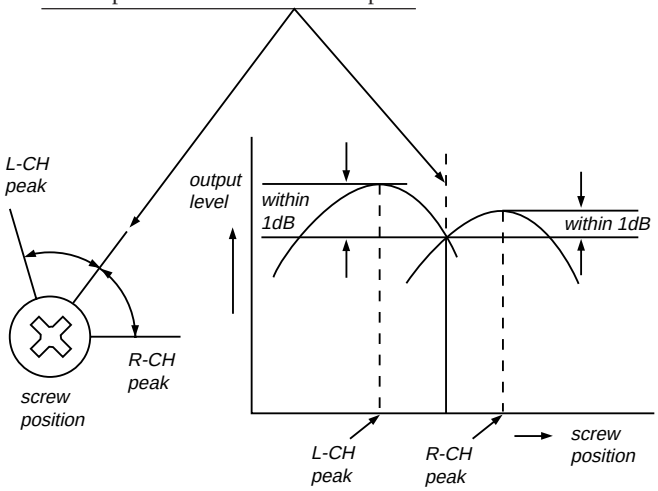
### Record/Playback Head Azimuth Adjustment

**Procedure :**

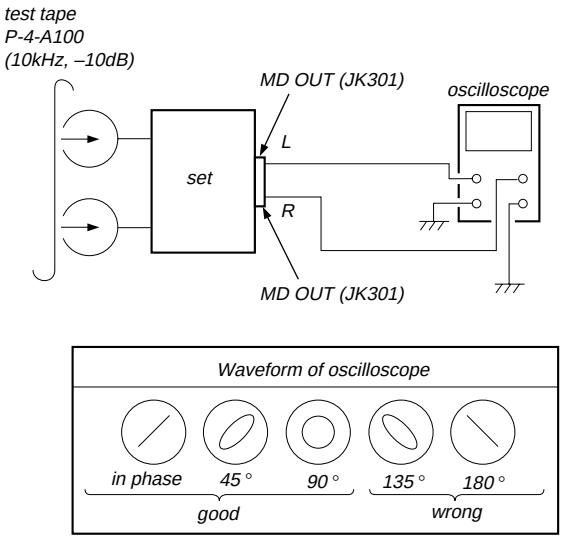
1. Mode : Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.

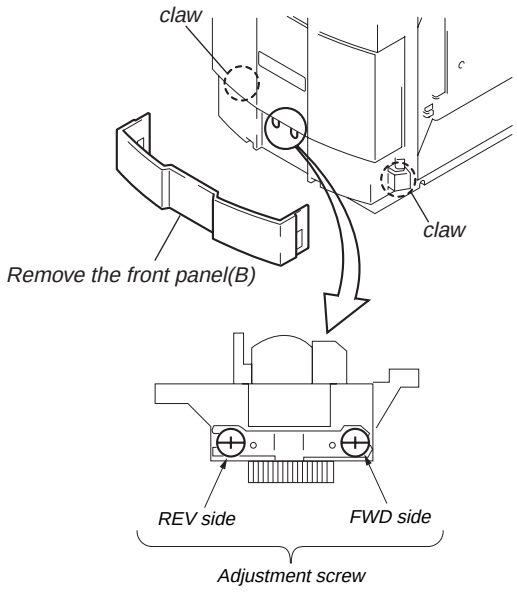



3. Mode : Playback



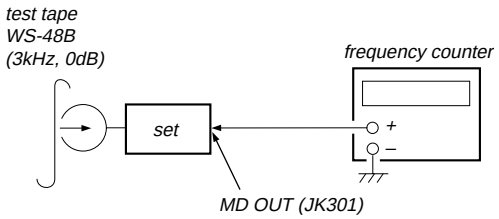

4. After the adjustments, apply suitable locking compound to the parts adjusted.

**Adjustment Location :**



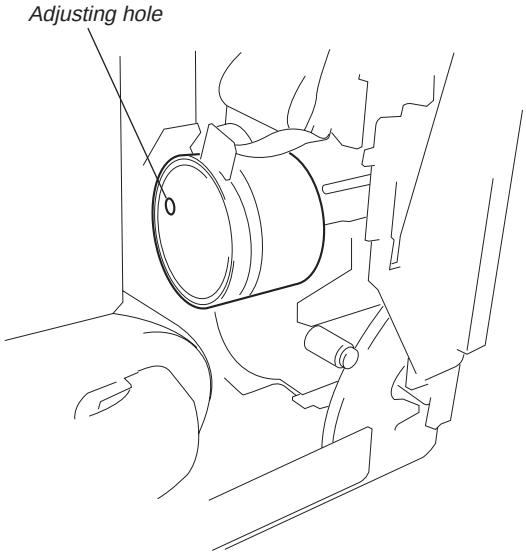

### Tape Speed Adjustment

**Procedure :**
Mode : Playback




1. Insert the WS-48B into the deck, and playback.
2. Adjust the Control at the bottom hole of the motor (M901) so that the frequency counter reading becomes 3000 ± 90 Hz.

**Adjustment Location :** MOTOR (M901)

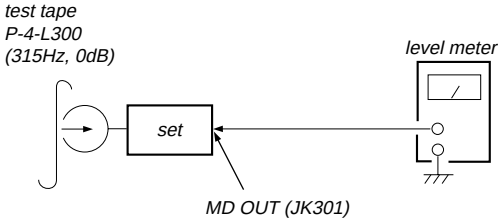



### Sample Value of Wow and flutter

W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

### Playback Level Adjustment

**Procedure :**
Mode : Playback



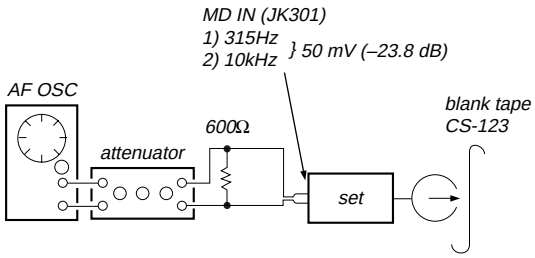

Deck is VR703 (L-CH) and VR704 (R-CH)
so that adjustment within the following adjustment level.

**Adjustment level :**
Playback level: 301.5 to 338.3 mV (–8.2 to –7.2 dB) level difference between the channels: within ±0.5 dB
**Adjustment Location :** TAPE PREAMP board

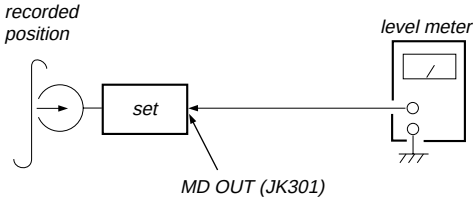
### Record Bias Adjustment

**Procedure :**

1. Mode : Record




2. Mode : Playback



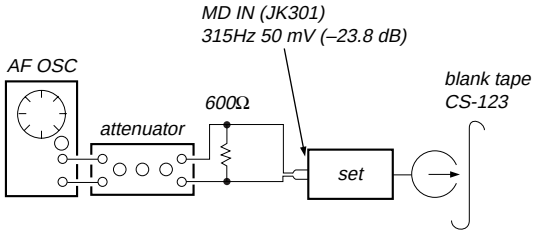

Confirm playback the signal recorded in step 1 become adjustment level as follows.
If these levels do not adjustment level, adjustment the VR701 (L-CH) and VR702 (R-CH) on the TAPE PREAMP board to repeat steps 1 and 2.

**Adjustment level :** Playback output of 10kHz level diffrence against 315Hz reference should be ±0.5 dB.
**Adjustment Location :** TAPE PREAMP board

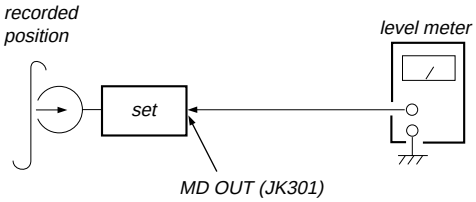
### Record Level Adjustment

**Procedure :**

1. Mode: Record




2. Mode: Playback

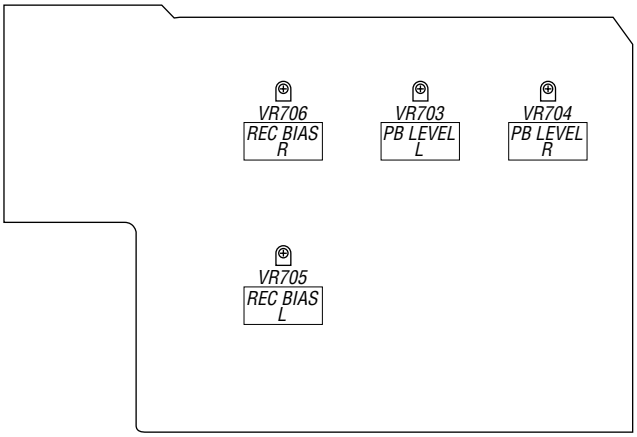



Confirm playback the signal recorded in step 1 become adjustment level as follows.
If these levels do not adjustment level, adjustment the VR705 (L-CH) and VR706 (R-CH) on the TAPE PREAMP board to repeat steps 1 and 2.

**Adjustment level :**
Playback level : 47.2 to 53.0 mV (–24.3 to –23.3 dB)
**Adjustment Location :** TAPE PREAMP board

### Adjustment Location

**[TAPE PREAMP BOARD]** (Component Side)

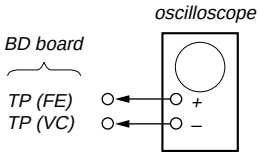


## CD SECTION

**Note:**

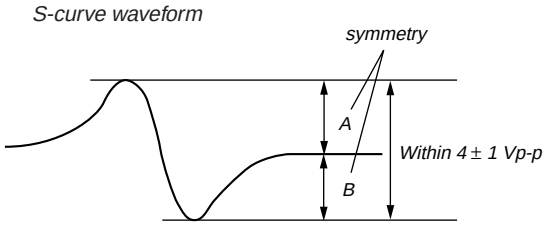
1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

### S Curve Check




**Procedure :**

1. Connect the oscilloscope to test points TP (FE) and TP (VC).
2. Connect TP (FEI) and Ground, and TP (AGCCON) and Ground of the BD board with lead wires.
3. Press the I/⏻ button to turn the set ON.
4. With the disc (YEDS-18) loaded, press the ► button and perform focus search. (Focus search will be performed in the same way even while the disc table is pushed in and out.)
5. Check the symmetry and peak to peak level of the oscilloscope waveform (S curve) at this time.

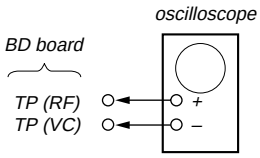



6. After check, remove the lead wire connected in step 2.

**Note:** • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

**Checking Location : BD board**

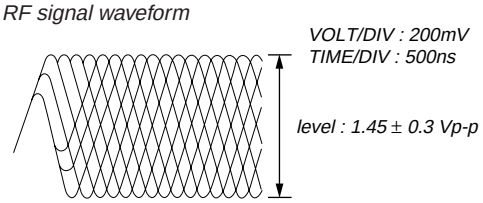
### RF Level Check




**Procedure :**

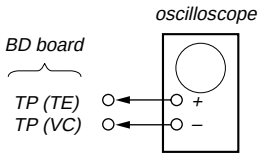
1. Connect oscilloscope to test point TP (RF) and TP (VC) on BD board.
2. Connect TP (AGCCON) and Ground of the BD board with lead wires.
3. Press the I/⏻ button to turn the set ON.
4. Put disc (YEDS-18) in and playback 5track.
5. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

**Note:** Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.




**Checking Location : BD board**

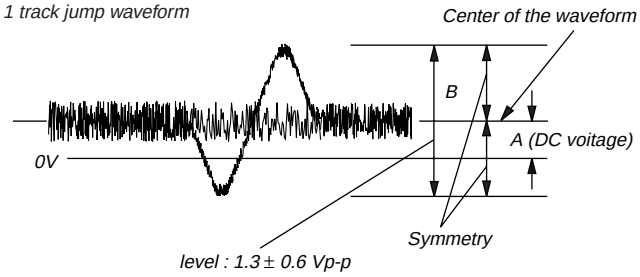
### E-F Balance (1 Track Jump) check




**Procedure:**

1. Connect oscilloscope to test point TP (TE) and TP (VC) on BD board.
2. Press the I/⏻ button to turn the unit ON.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the ► button.
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following:

   • A/B x 100 = less then ± 22 (%)
   • B = 1.3 ± 0.6 Vp-p




**Checking Location : BD board**

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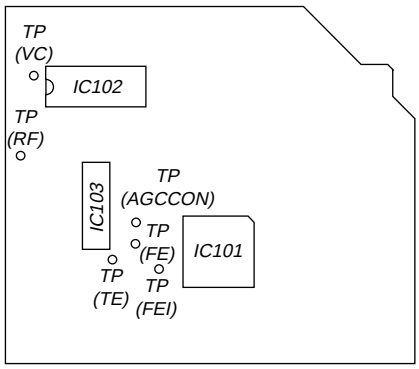
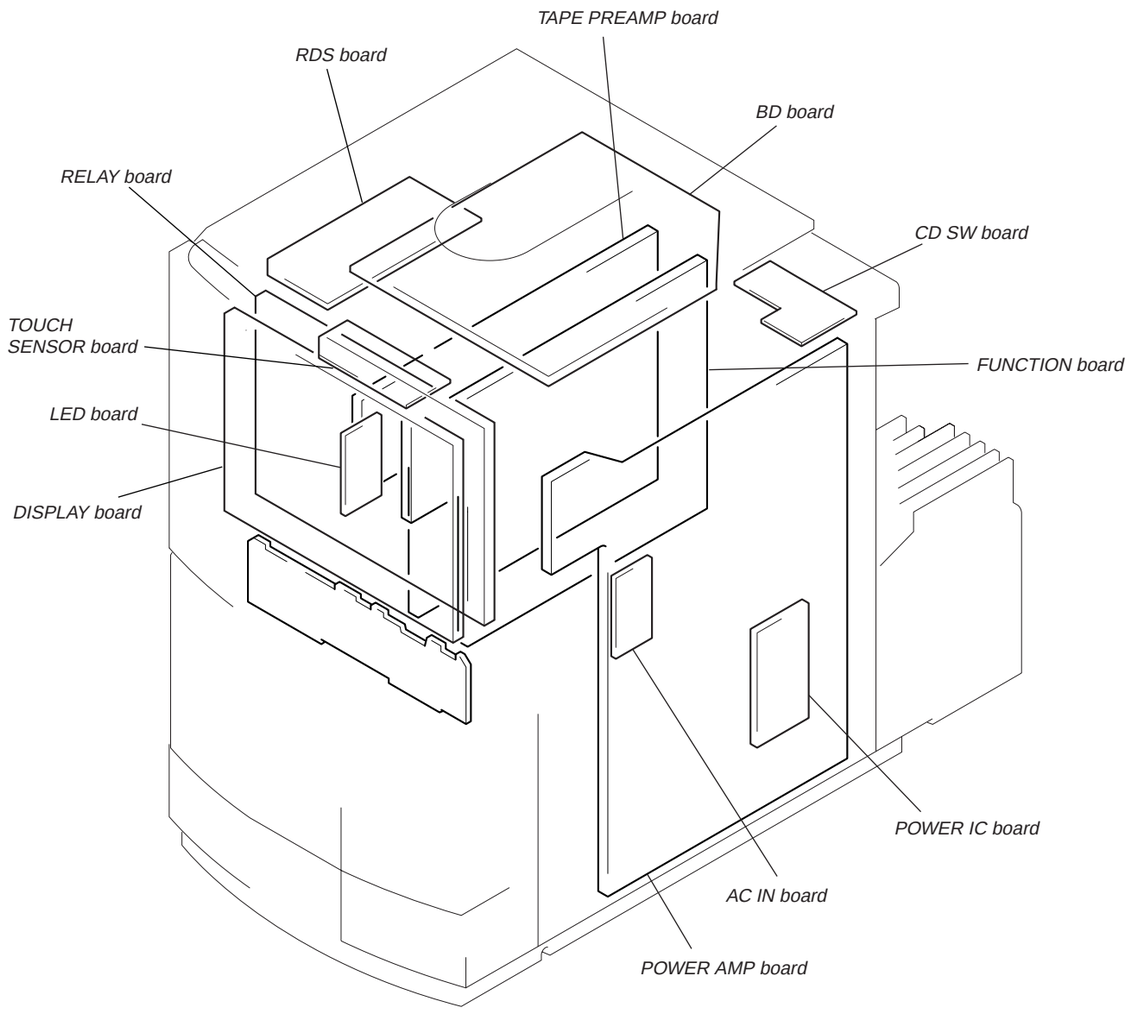
**Checking Location : BD board**
**[ BD BOARD ]** — SIDE B —



# SECTION 6
# DIAGRAMS

## 6-1. CIRCUIT BOARDS LOCATION




**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**
**(In addition to this, the necessary note is printed in each block.)**

**For schematic diagrams.**

**Note:**

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

- B+ : B+ Line.
- B− : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : VIDEO
  - : PB (DECK A)
  - : REC
  - : CD
  - : CD (digital out)
- Abbreviation
  - CND : Canadian model.
  - SP : Singapore model.
  - MY : Malaysia model.
  - HK : Hong Kong model.
  - KR : korea model.
  - AUS : Australian model.

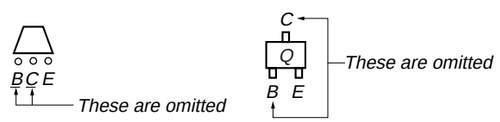
**For printed wiring boards.**

**Note:**

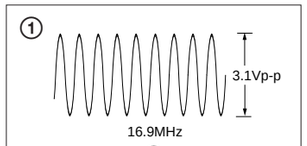
- ○——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- ▒ : Pattern from the side which enables seeing.

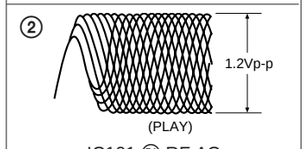
(The other layers' patterns are not indicated.)

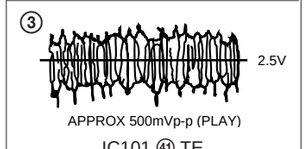
- **Indication of transistor**

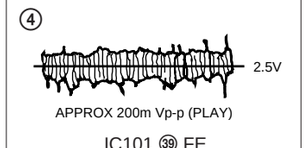


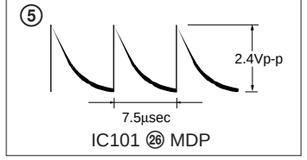

**WAVEFORMS**
**– BD (CD) SECTION –**



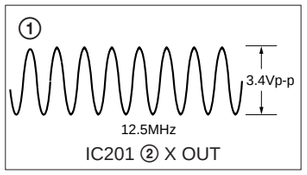




**– DISPLAY SECTION –**

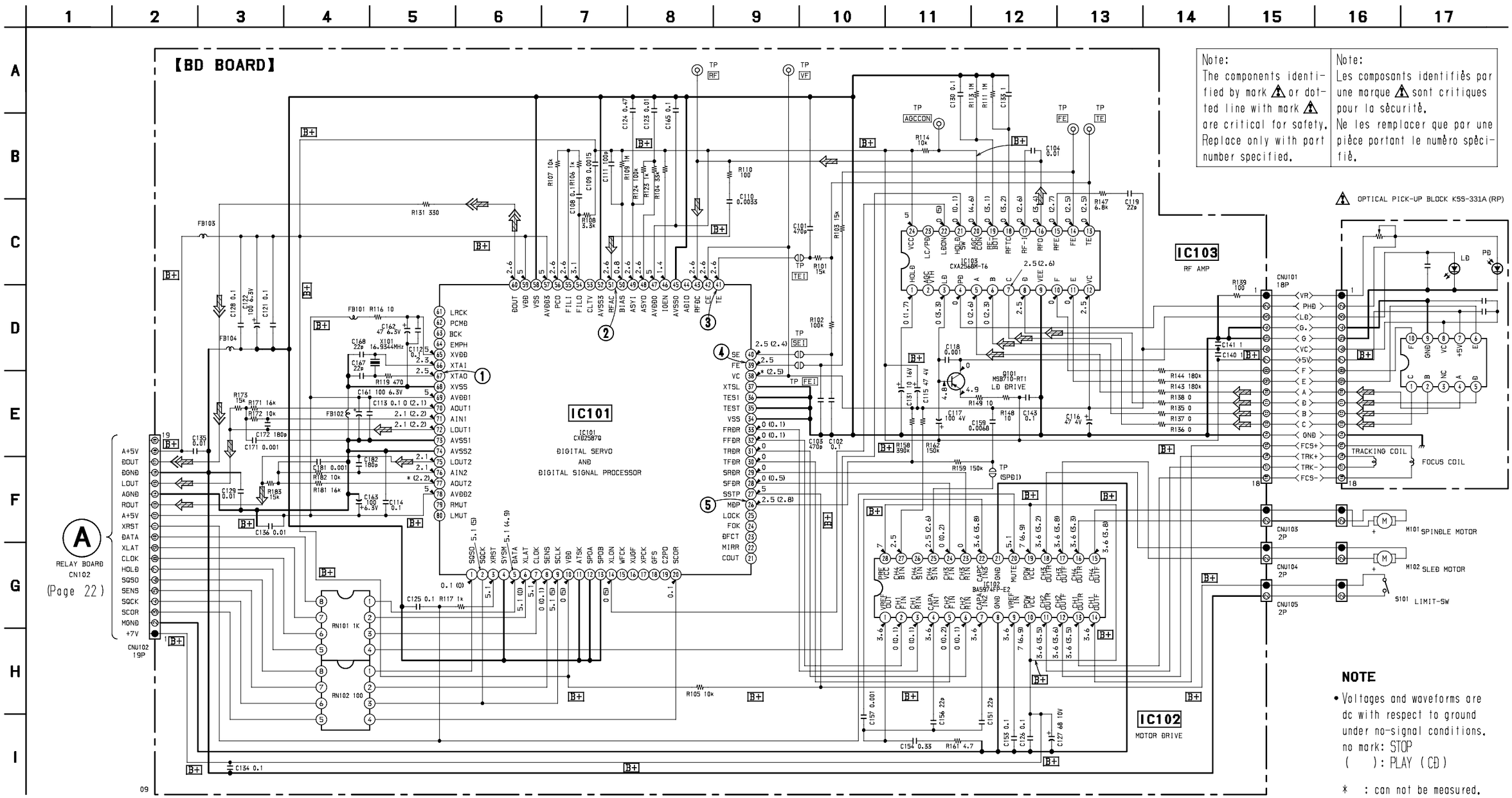




13

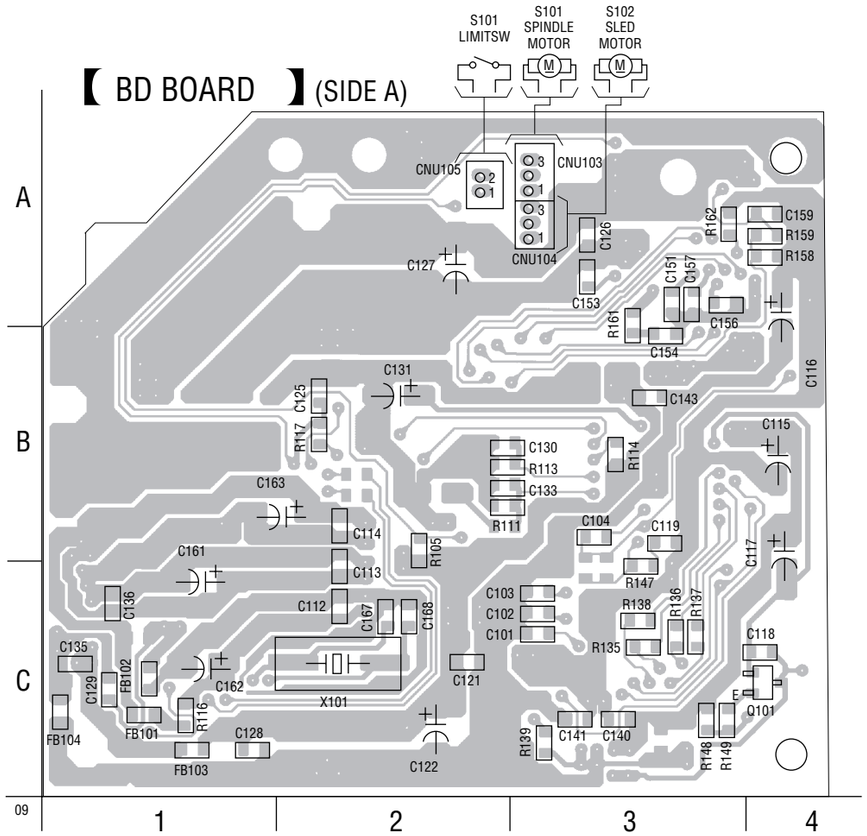
## 6-2. SCHEMATIC DIAGRAM – BD SECTION –

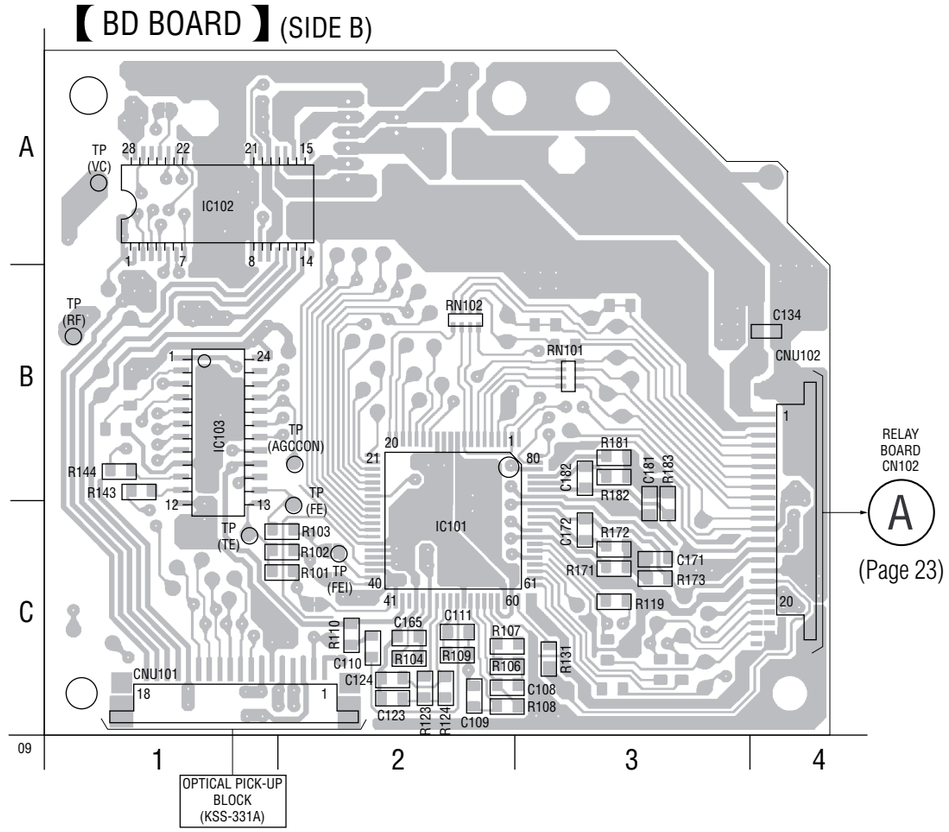
- See page 13 for Waveforms.
- See page 15 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.



**6-3. PRINTED WIRING BOARD – BD SECTION –**

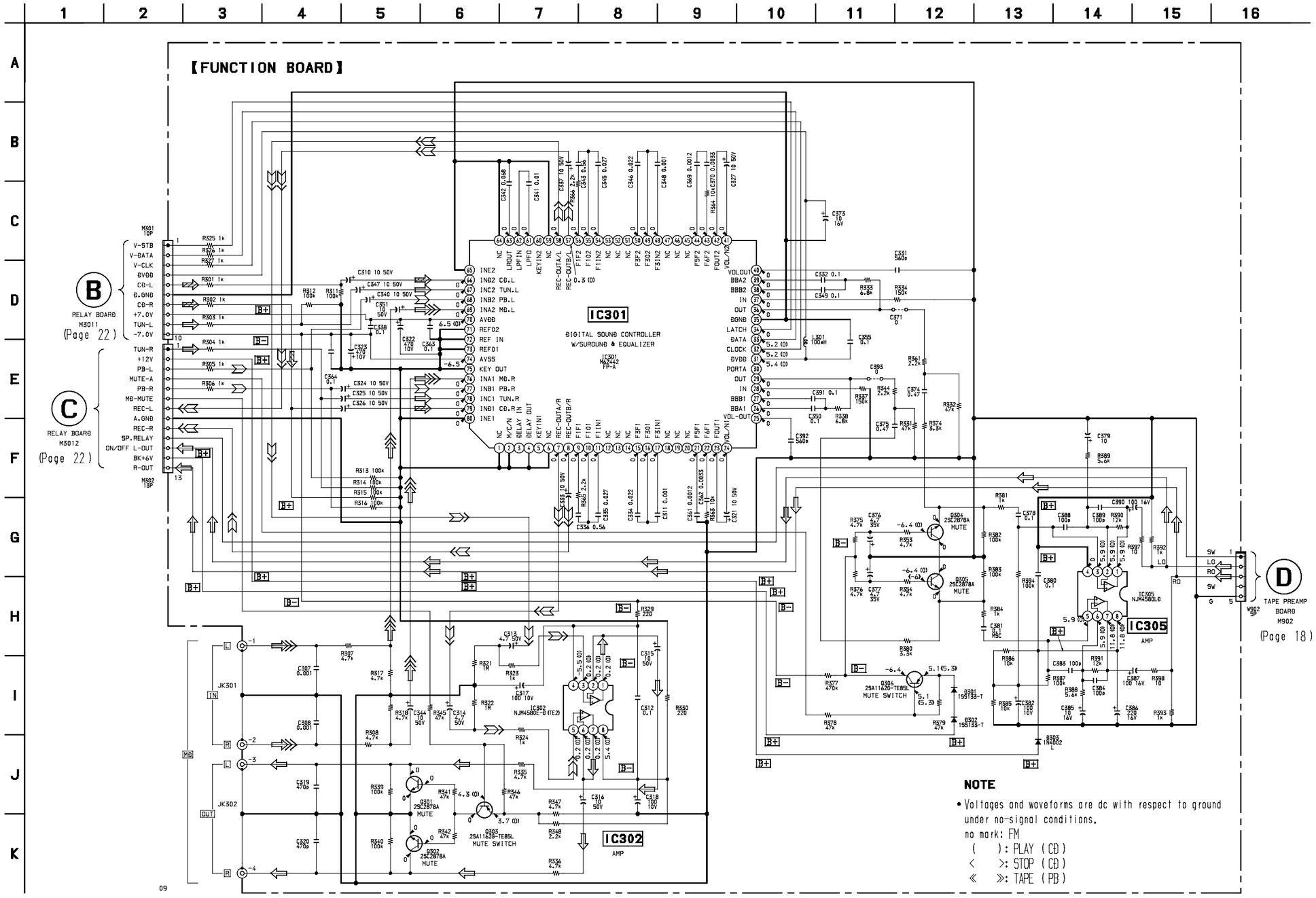
**• See page 13 for Circuit Boards Location.**



## 6-4. SCHEMATIC DIAGRAM – FUNCTION SECTION –

- See page 13 for Waveforms.
- See page 17 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.



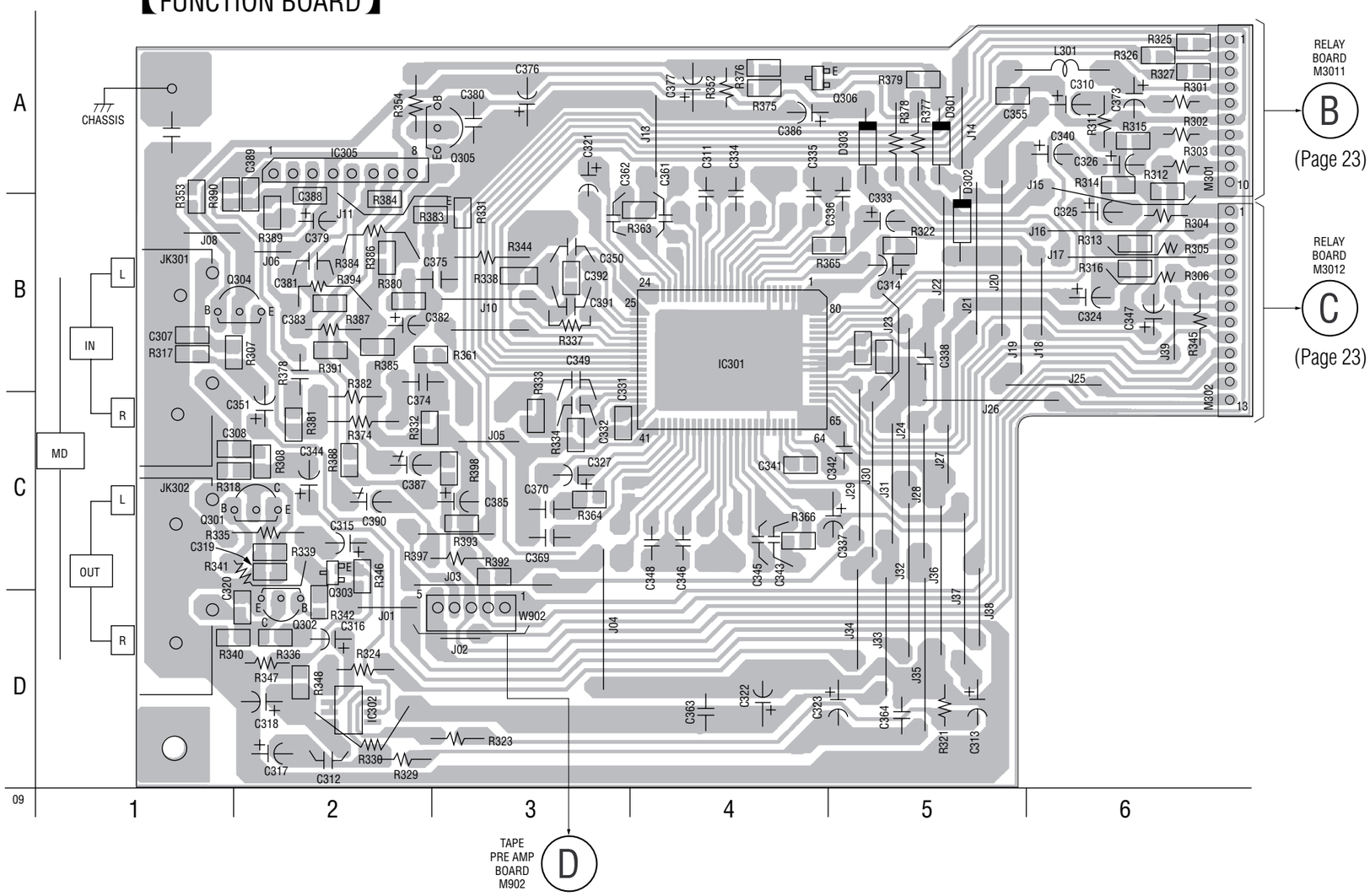
## 6-5. PRINTED WIRING BOARD – FUNCTION SECTION –

• See page 13 for Circuit Boards Location.

**• Semiconductor Location**

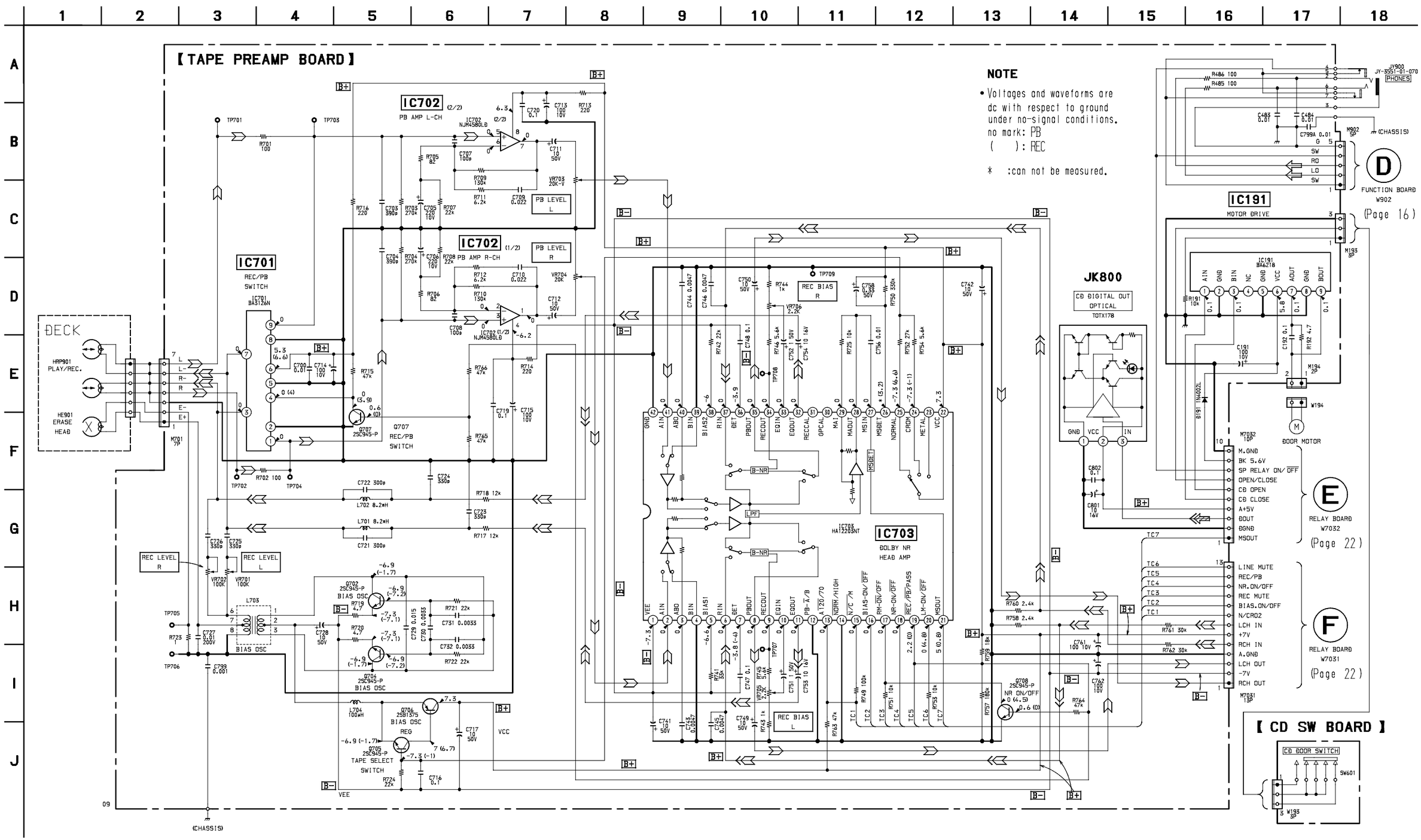
| Ref. No. | Location |
|---|---|
| D301 | A-5 |
| D302 | A-5 |
| D303 | A-5 |
| IC301 | B-4 |
| IC302 | D-2 |
| IC305 | A-2 |
| Q301 | C-2 |
| Q302 | C-2 |
| Q303 | C-2 |
| Q304 | B-1 |
| Q305 | A-3 |
| Q306 | A-2 |

【FUNCTION BOARD】



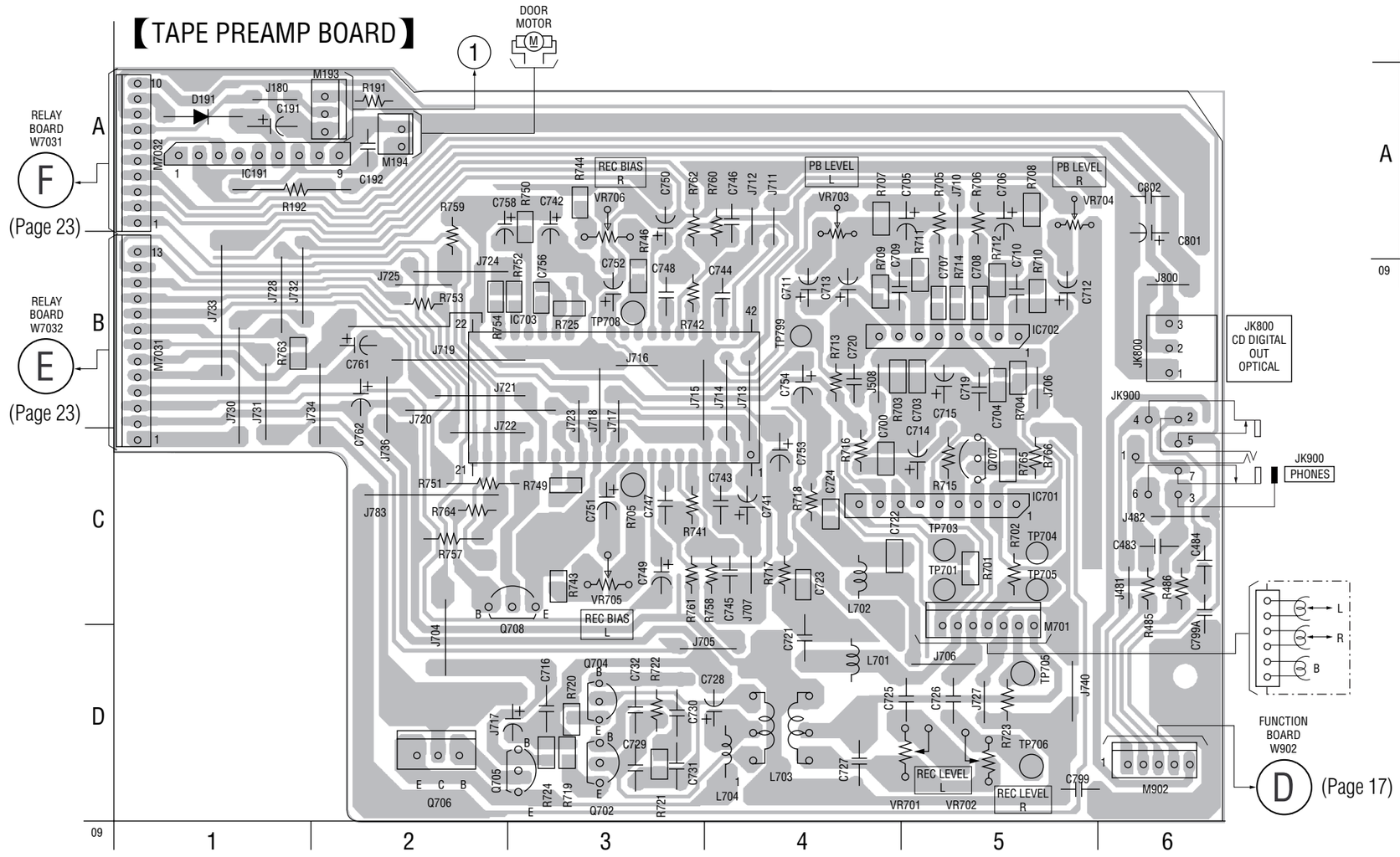
## 6-6. SCHEMATIC DIAGRAM – TAPE PREAMP SECTION –

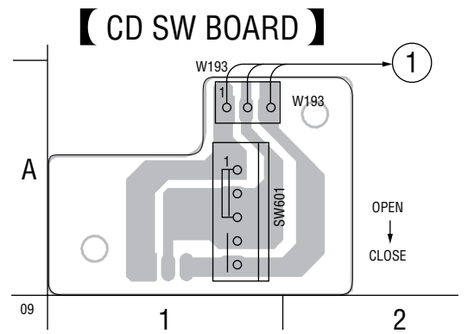
- See page 13 for Waveforms.
- See page 19 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.



### 6-7. PRINTED WIRING BOARD – TAPE PREAMP SECTION –

• See page 13 for Circuit Boards Location.



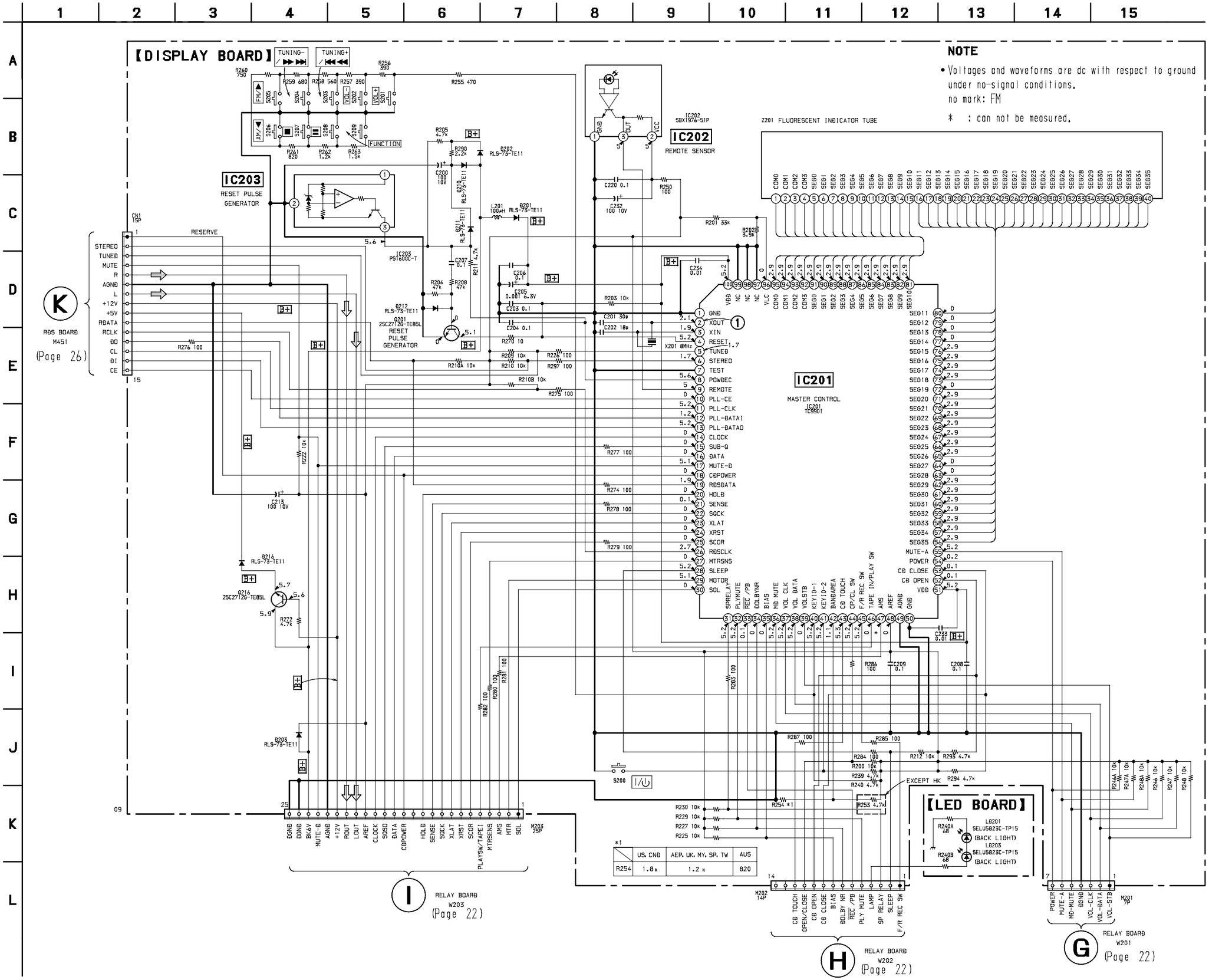




• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D191 | A-1 |
| IC191 | A-1 |
| IC701 | C-5 |
| IC702 | B-5 |
| IC703 | B-3 |
| Q702 | D-3 |
| Q704 | D-3 |
| Q705 | D-3 |
| Q706 | D-2 |
| Q707 | C-5 |
| Q708 | C-2 |

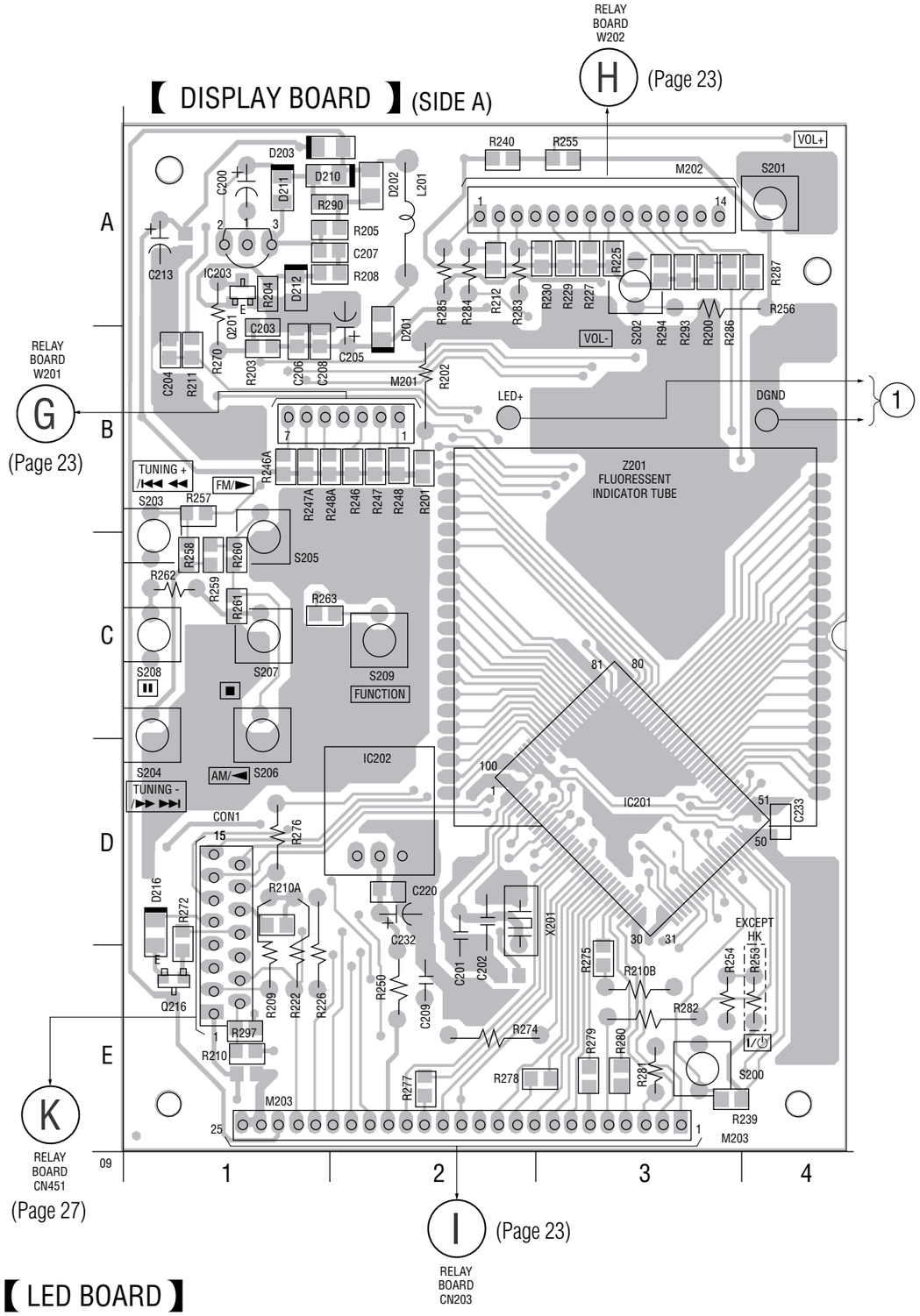
## 6-8. SCHEMATIC DIAGRAM – DISPLAY SECTION –

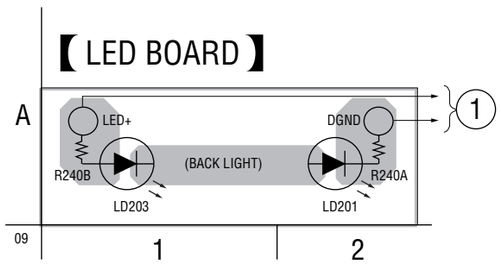

- See page 13 for Waveforms.
- See page 21 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.

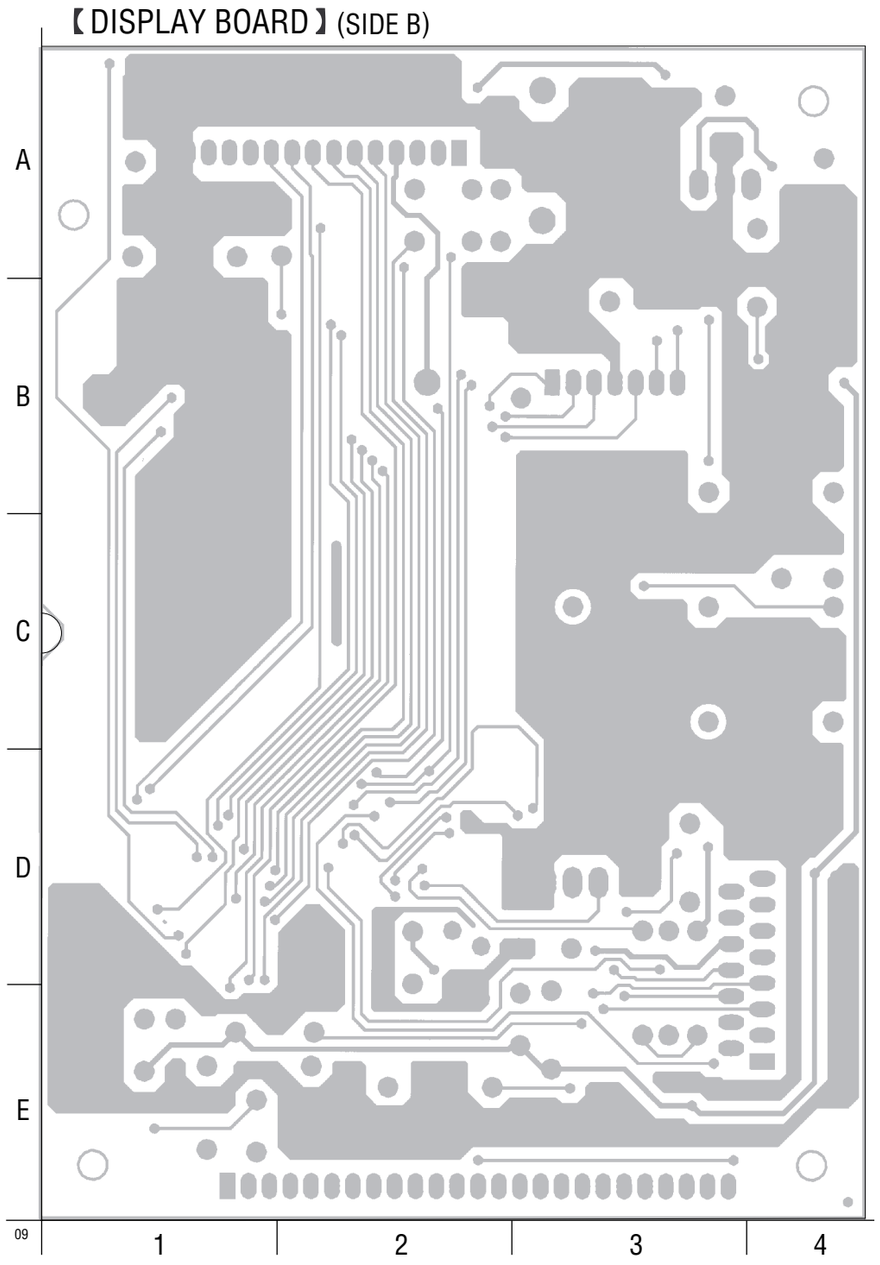



**6-9. PRINTED WIRING BOARD – DISPLAY SECTION –**

**• See page 13 for Circuit Boards Location.**




**• Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D201 | B-2 |
| D202 | A-2 |
| D203 | A-1 |
| D210 | A-2 |
| D211 | A-1 |
| D212 | A-1 |
| D216 | D-1 |
| IC201 | D-3 |
| IC202 | D-2 |
| IC203 | A-1 |
| Q201 | A-1 |
| Q216 | E-1 |

## 6-10. SCHEMATIC DIAGRAM – RELAY SECTION –

- See page 13 for Waveforms.
- See page 23 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.

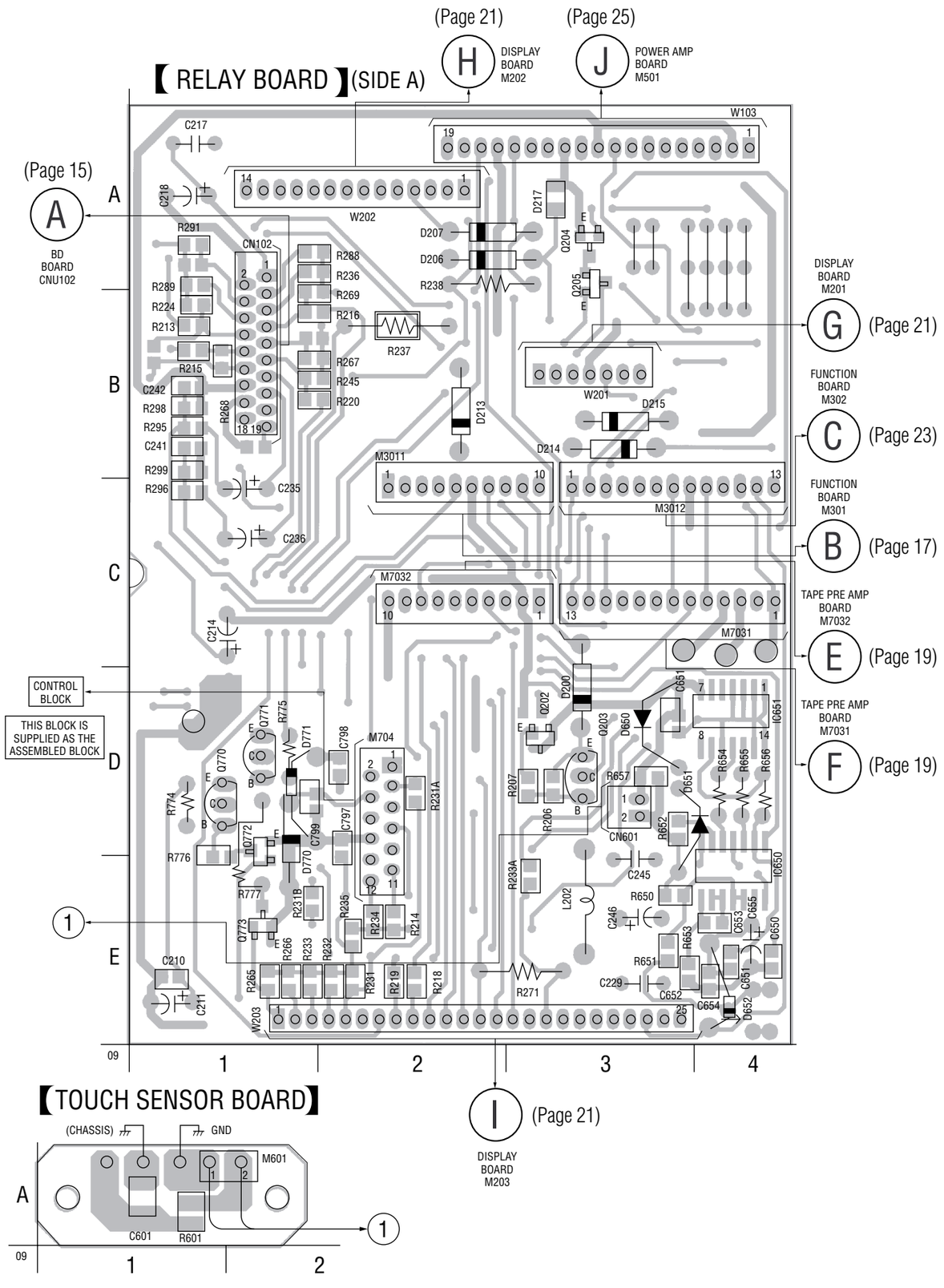
**NOTE**

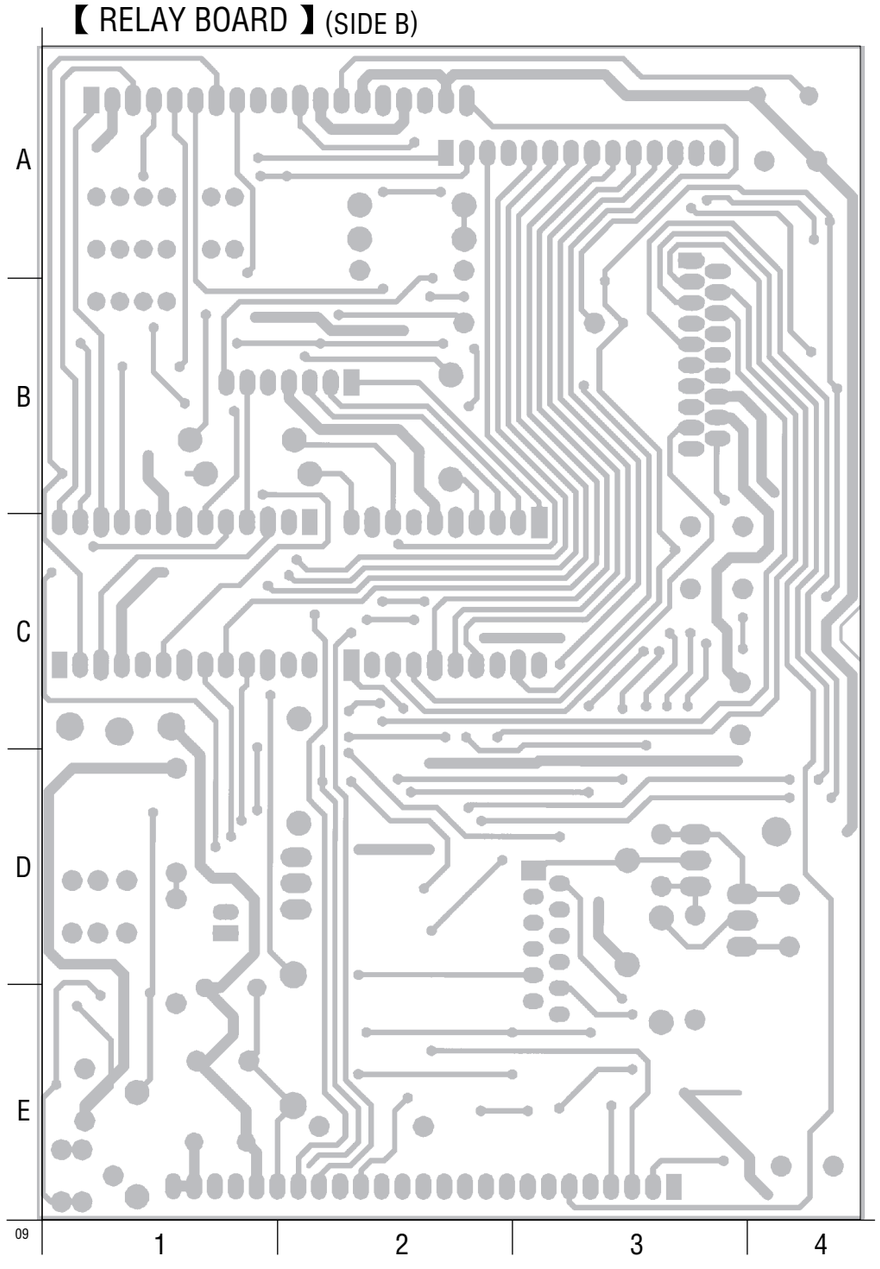
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: FM

【RELAY BOARD】

**6-11. PRINTED WIRING BOARD – RELAY SECTION –**

**• See page 13 for Circuit Boards Location.**



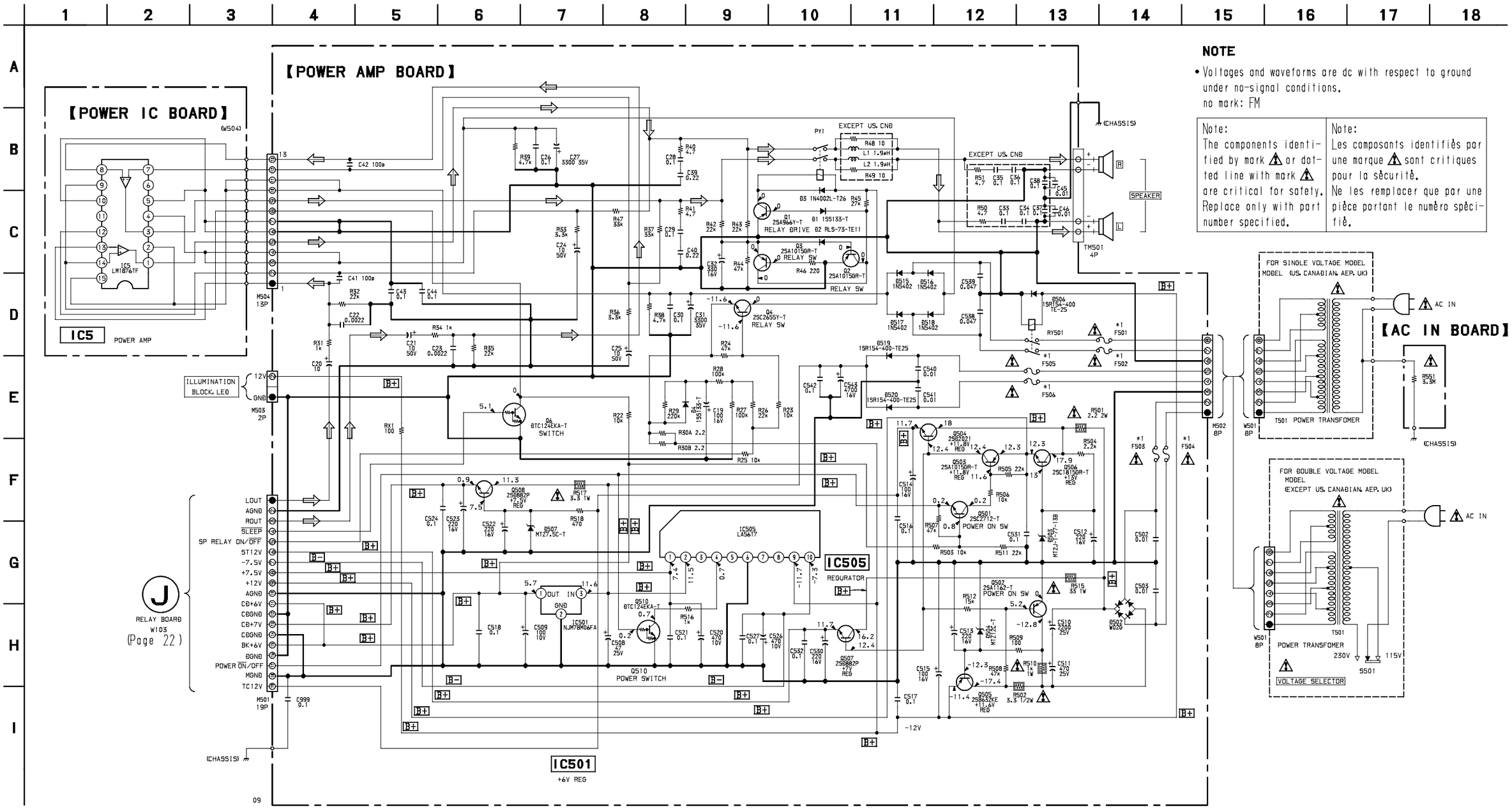




**• Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D200 | D-3 |
| D206 | B-2 |
| D207 | A-2 |
| D213 | B-2 |
| D214 | B-3 |
| D215 | B-3 |
| D650 | D-4 |
| D651 | E-4 |
| D652 | E-4 |
| D770 | E-1 |
| D771 | D-1 |
| IC650 | E-4 |
| IC651 | D-4 |
| Q202 | D-3 |
| Q203 | D-3 |
| Q204 | A-3 |
| Q205 | B-3 |
| Q770 | D-1 |
| Q771 | D-1 |
| Q772 | D-1 |
| Q773 | E-1 |

## 6-12. SCHEMATIC DIAGRAM – POWER SECTION –

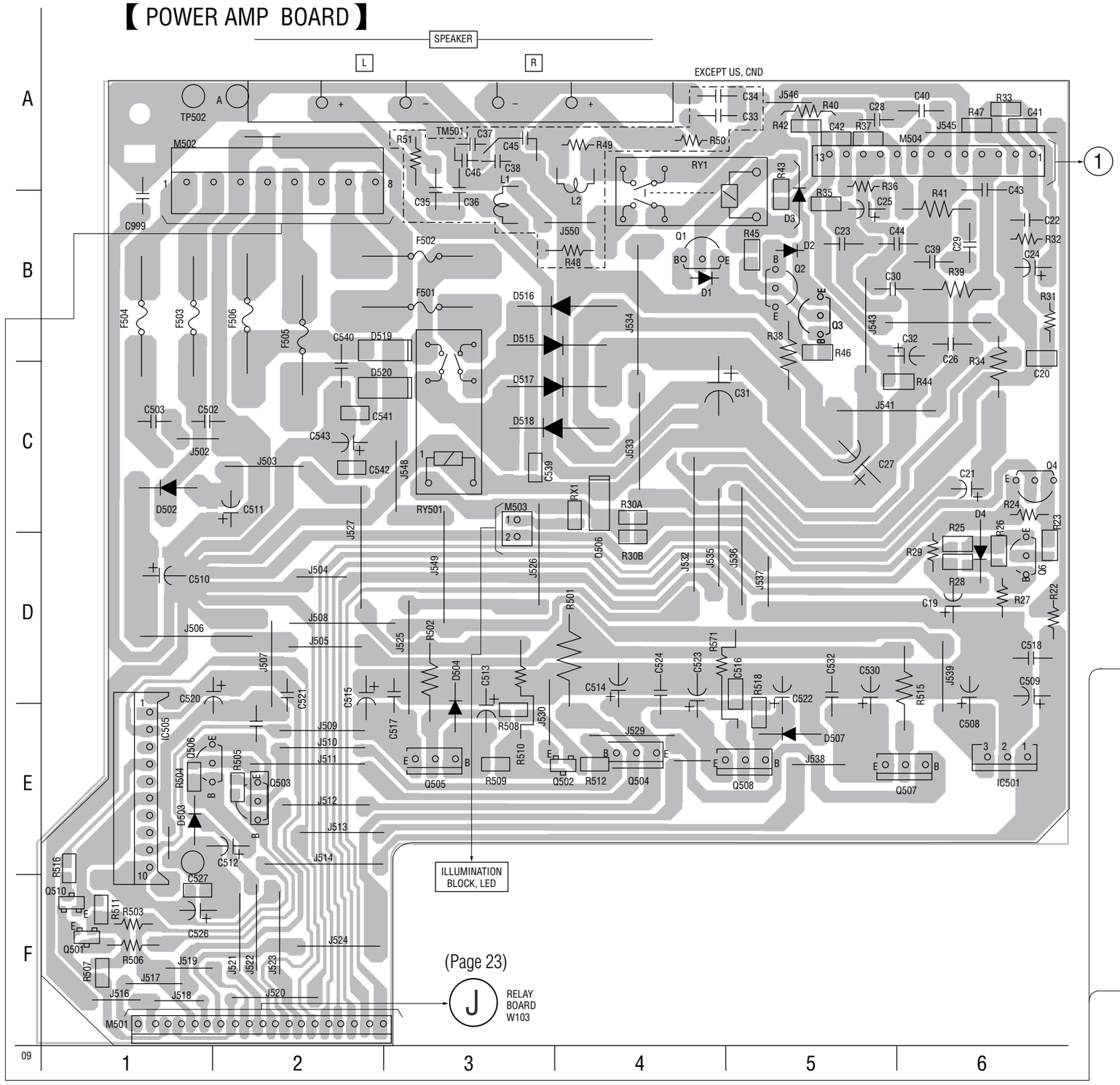
- See page 13 for Waveforms.
- See page 25 for Printed Wiring Board.
- See page 28 for IC Block Diagrams.
- See page 30 for IC Pin Functions.



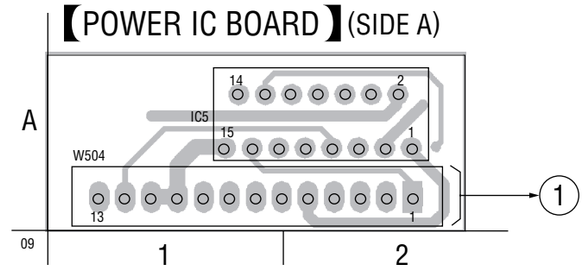
## 6-13. PRINTED WIRING BOARD – POWER SECTION –

• See page 13 for Circuit Boards Location.

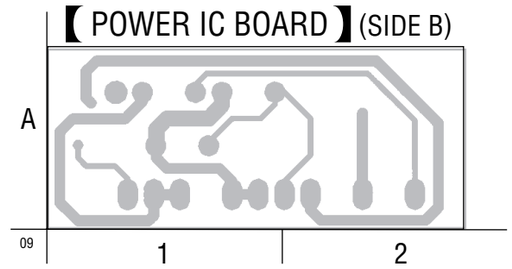
【 POWER AMP BOARD 】




【 POWER IC BOARD 】(SIDE A)

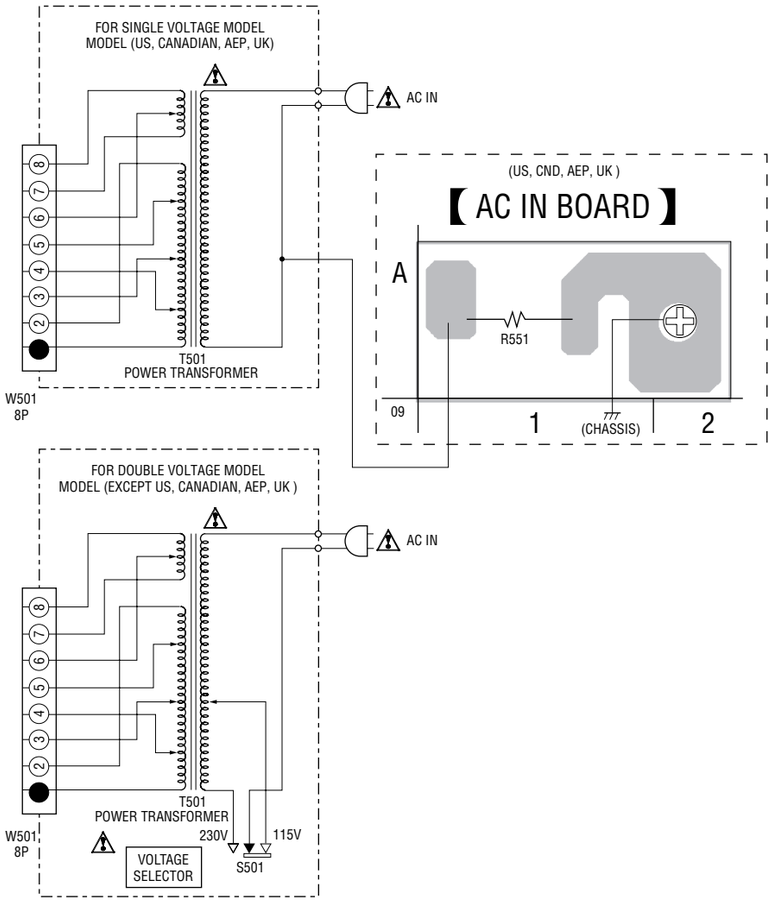



【 POWER IC BOARD 】(SIDE B)



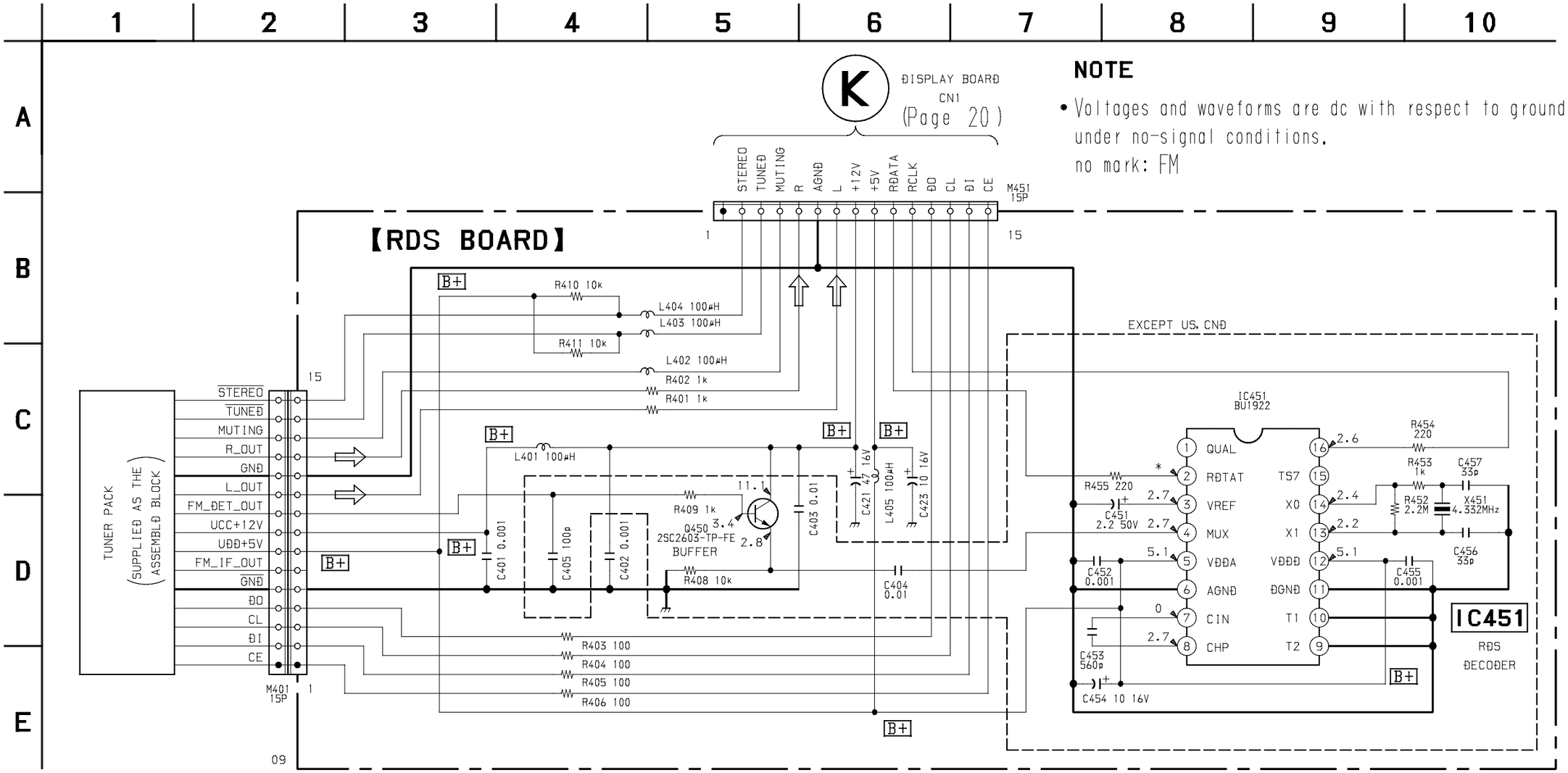

• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D1 | B-4 |
| D2 | B-5 |
| D3 | A-5 |
| D4 | D-6 |
| D502 | C-1 |
| D503 | E-1 |
| D504 | D-3 |
| D506 | C-4 |
| D507 | D-5 |
| D515 | B-3 |
| D516 | B-4 |
| D517 | B-3 |
| D518 | C-3 |
| D519 | B-2 |
| D520 | B-2 |
| IC501 | E-6 |
| IC505 | E-1 |
| Q1 | B-4 |
| Q2 | B-5 |
| Q3 | B-5 |
| Q4 | C-6 |
| Q6 | D-6 |
| Q501 | F-1 |
| Q502 | E-4 |
| Q504 | E-4 |
| Q505 | E-3 |
| Q506 | E-6 |
| Q507 | F-1 |
| Q508 | E-5 |
| Q510 | F-1 |



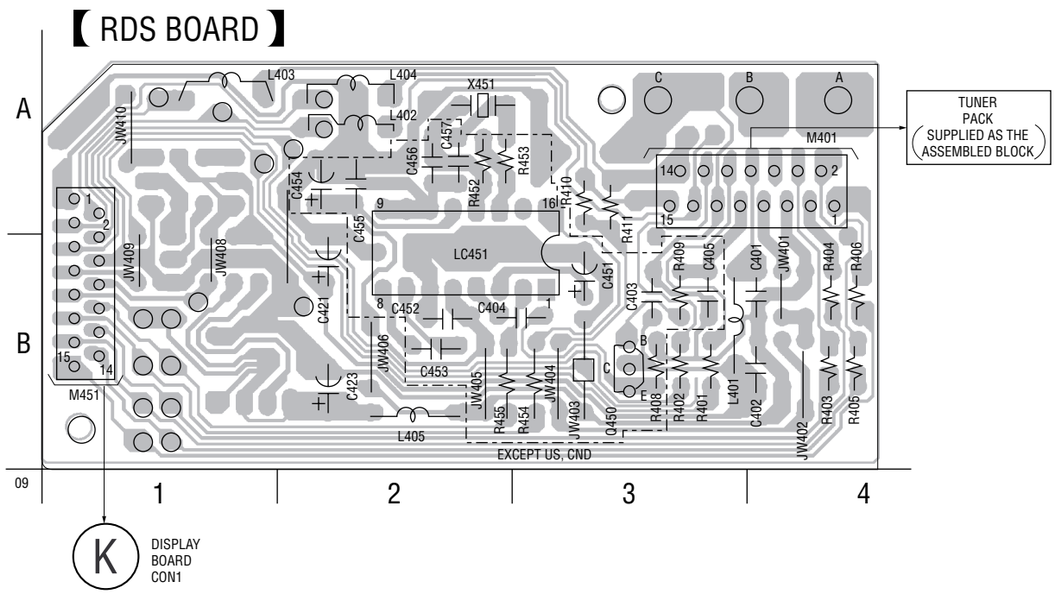
**6-14. SCEMATIC DIAGRAM – RDS SECTION –**

- **See page 13 for Waveforms.**
- **See page 27 for Printed Wiring Board.**
- **See page 28 for IC Block Diagrams.**
- **See page 30 for IC Pin Functions.**



**6-15. PRINTED WIRING BOARD – RDS SECTION –**

**• See page 13 for Circuit Boards Location.**

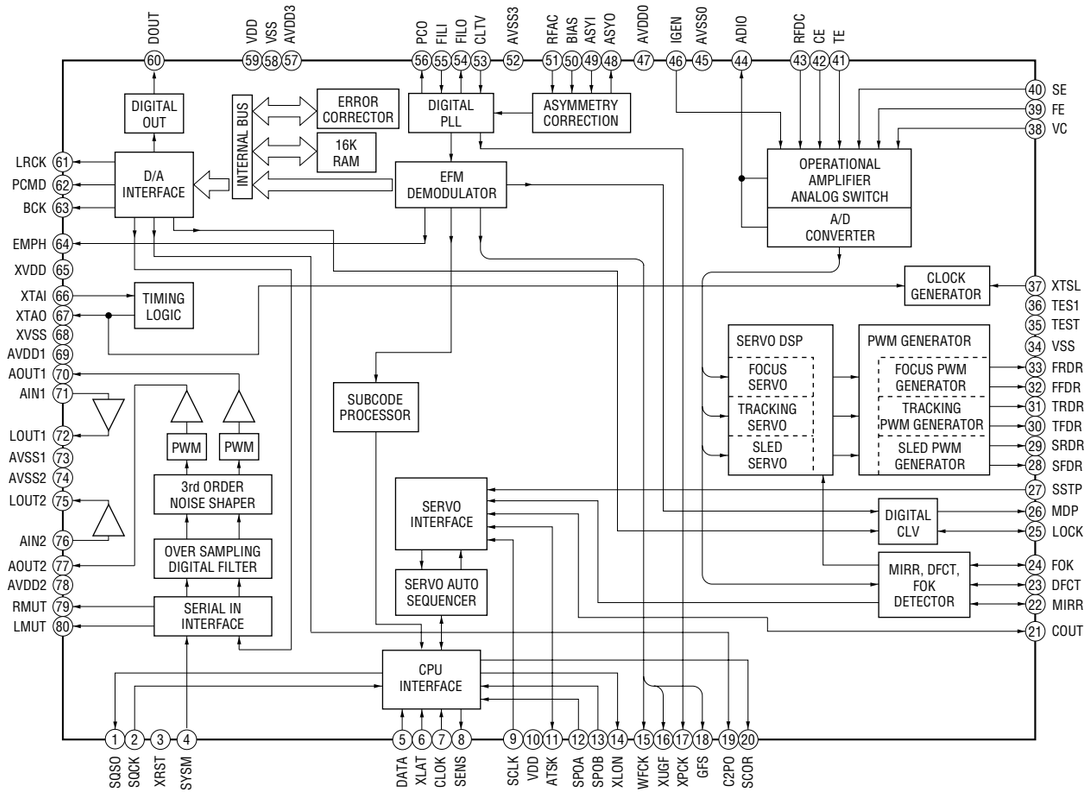



(Page 21)

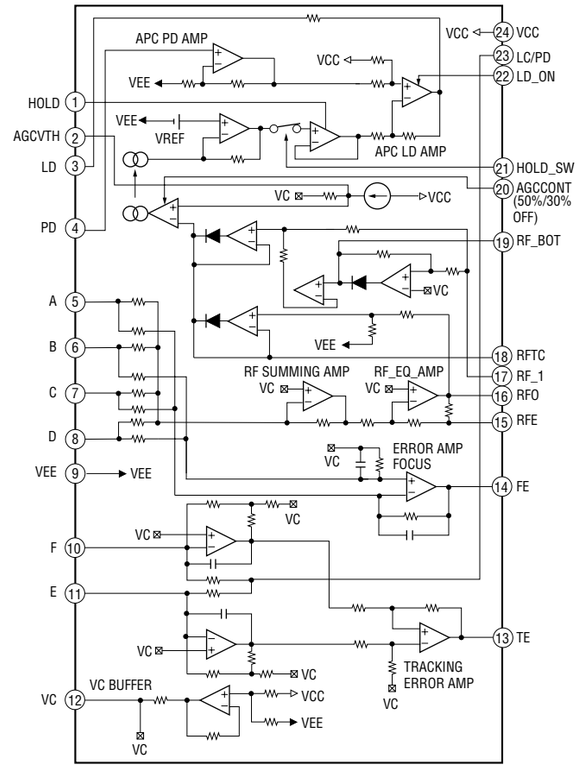
## 6-16. IC BLOCK DIAGRAMS

• BD Board

IC101 CXD2587Q

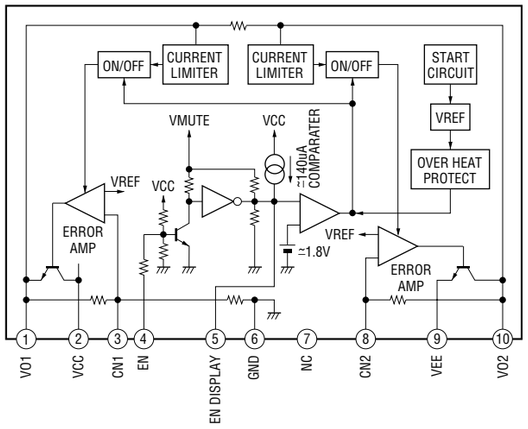



IC103 CXA2568M-T6



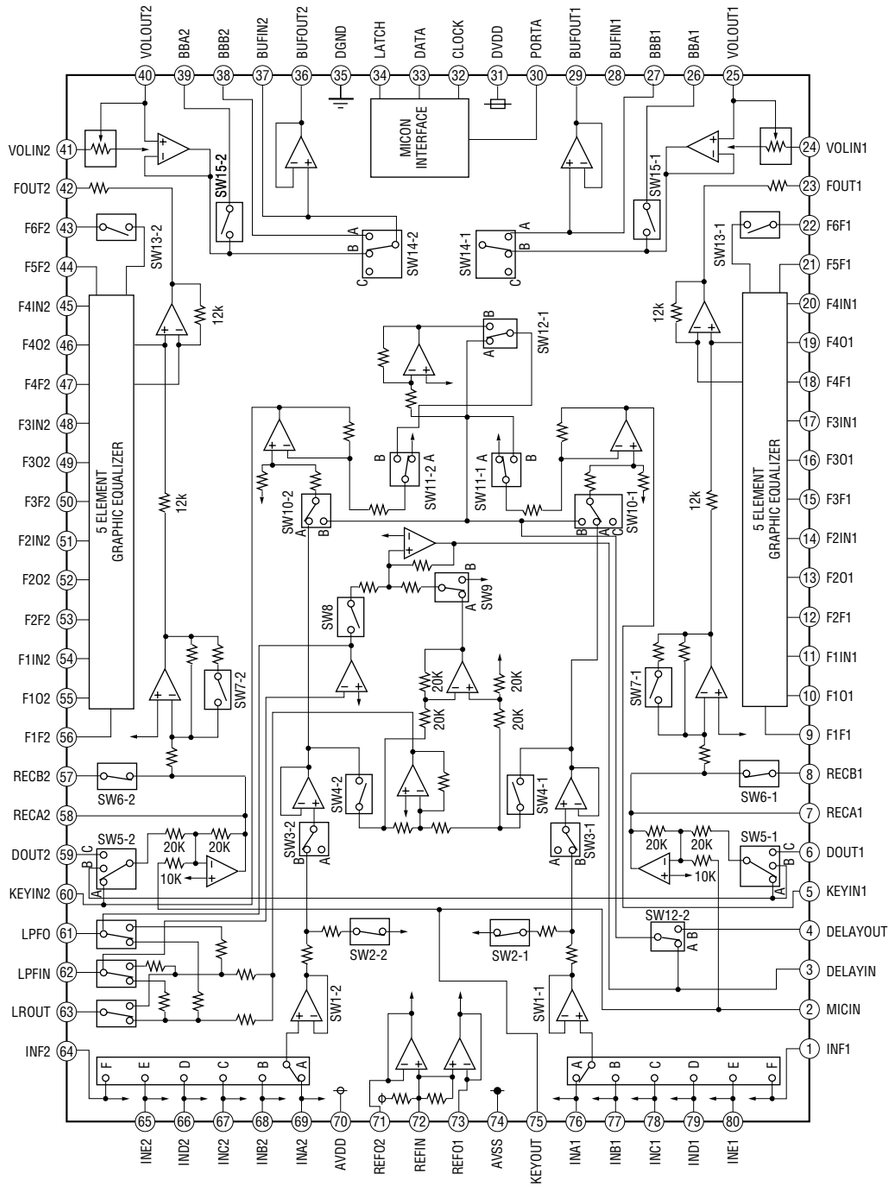

• POWER AMP Board

IC505 LA5617



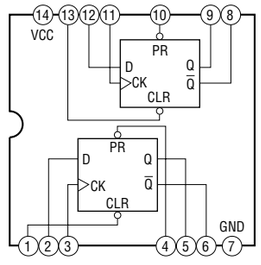

• FUNCTION Board

IC301 M62442




• RELAY Board

IC650, 651 SN74HC74ANS

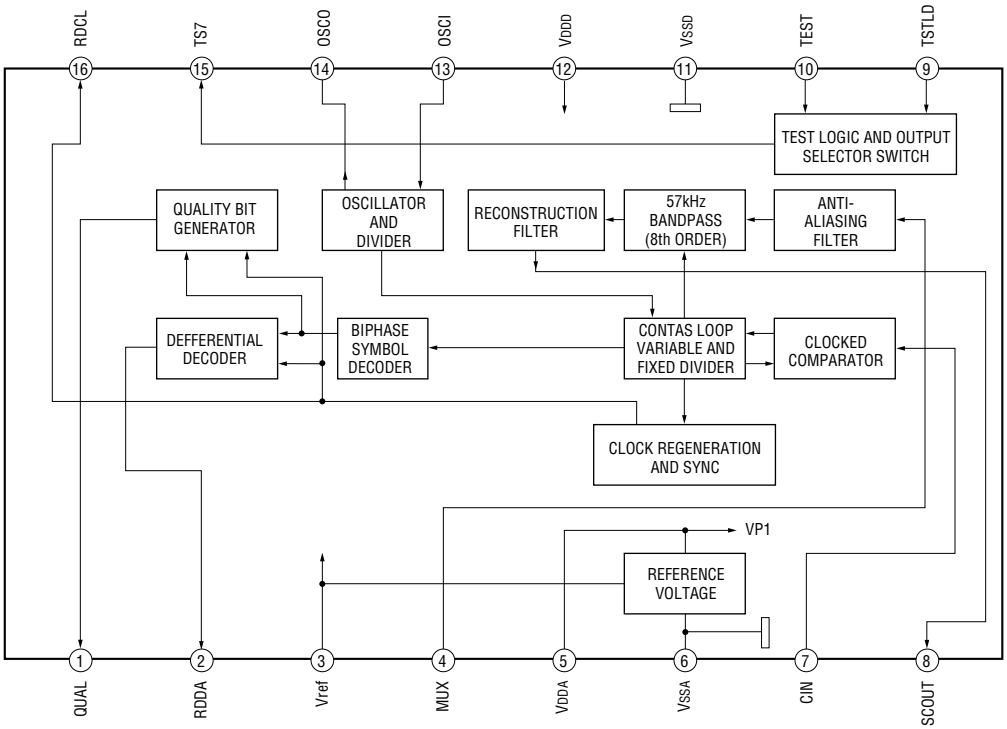




28

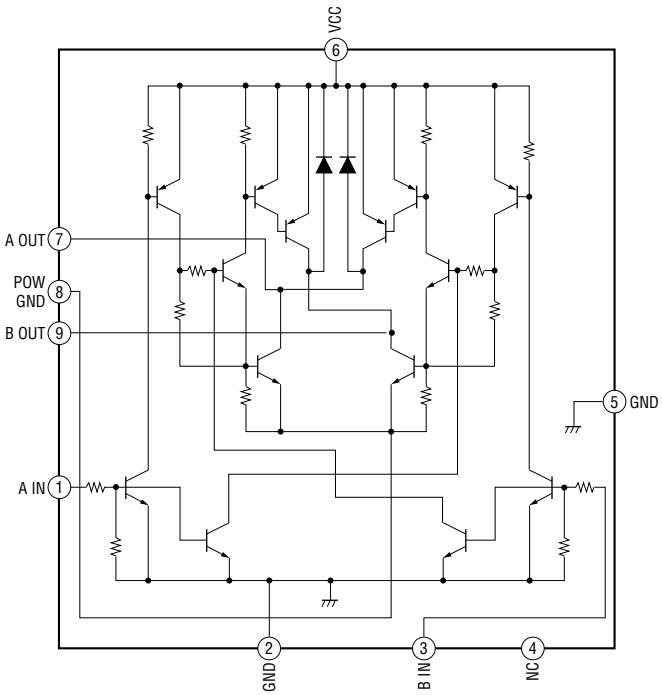
**• RDS Board**

**IC451 BU1922**




**• TAPE PREAMP Board**

**IC191 BA6218**



## 6-17. IC PIN FUNCTIONS

**• IC201 MASTER CONTROL (TC9901) (DYSPLAY Board)**

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 1 | GND | I | GND |
| 2 | XOUT | O | 8MHz Oscillator |
| 3 | XIN | I | 8MHz Oscillator |
| 4 | RESET | I | CPU reset input |
| 5 | TUNED | I | Station detector input |
| 6 | STEREO | I | Stereo signal input |
| 7 | TEST | I | No Use, Tied to low |
| 8 | POWDEC | I | Power down detect |
| 9 | REMOTE | I | Remote signal input |
| 10 | PLL-CE | O | LC72131 chip enable output |
| 11 | PLL-CLK | O | LC72131 clock output |
| 12 | PLL-DATAI | I | LC72131 data input |
| 13 | PLL-DATAO | O | LC72131 data output |
| 14 | CLOCK | O | Servo command clock output |
| 15 | SUB-Q | I | Servo subq data & status input |
| 16 | DATA | O | Servo command data output |
| 17 | MUTE_D | O | Digital mute control output |
| 18 | CDPORWER | O | CD power supply |
| 19 | RDS-DATA | I | BU1922 RDS data input |
| 20 | HOLD | O | Servo search Hi output |
| 21 | SENSE | I | Servo status SENSE input |
| 22 | SQCK | O | Servo subq/sense read clock output |
| 23 | XLAT | O | Servo command latch output |
| 24 | XRST | O | Servo chip reset output |
| 25 | SCOR | I | Servo SUBQ sync input |
| 26 | RDS_CLK | I | BU1922 RDS clock input |
| 27 | MTRSNS | I | Tape motor reel sense input |
| 28 | SLEEP | O | Digital Amp sleep control |
| 29 | MOTOR | O | Tape control output for Motor |
| 30 | SOL | O | Tape control output for Solenoid |
| 31 | SPRELAY | O | Power on/off RELAY control |
| 32 | PLYMUTE | O | Tape play back mute signal output |
| 33 | $\overline{\text{REC}}$/PB | O | Tape control output for REC/PB |
| 34 | DOLBYNR | O | Tape control output for DOLBY NR |
| 35 | BIAS | O | Tape control output for BIAS |
| 36 | MDMUTE | O | MD/REC ON mute output |
| 37 | VOL-CLK | O | M62442 audio control clock output |
| 38 | VOL-DATA | O | M62442 audio control data output |
| 39 | VOL-STB | O | M62442 audio control strobe output |
| 40 | KEYIO-1 | I | AD key input (16 keys) |
| 41 | KEYIO-2 | I | AD key input (16 keys) |
| 42 | BANDAREA | I | Band area option |
| 43 | CDTOUCH | I | CD door open/close touch sensor |
| 44 | OP/CL SW | I | CD loading open/close sw<br>open = 2.5V, close = 0V |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 45 | FRECSW<br>/<br>RRECSW | I | Tape forward/reverse record sw input<br>1.7V (2k4) = frecsw on & rrecsw on<br>2.25V (3k9) = frecsw on & rrecsw off<br>2.89V (6k8) = frecsw off & rrecsw on<br>5V = frecsw off & rrecsw off |
| 46 | PLAYSW<br>/<br>TAPEIN | I | Tape play/tape in sw input<br>1.7V (2k4) = play sw on & tape in sw on<br>2.25V (3k9) = Play sw on & tape in sw off<br>2.89V (6k8) = Play sw off & tape in sw on<br>5V = play sw off & tape in sw off |
| 47 | AMS | I | Tape music search input (HI = music) |
| 48 | AREF | I | A/D convert refrence input (+5v) |
| 49 | AGND | I | A/D convert Input GND input |
| 50 | GND | I | GND |
| 51 | VDD | I | +5V |
| 52 | OPEN | O | CD loading open motor on |
| 53 | CLOSE | O | CD loading close motor on |
| 54 | POWER | O | System power output |
| 55 | MUTE-A | O | Audio mute cuntrol output |
| 56 | SEG35 | O | LCD segment output |
| 57 | SEG34 | O | |
| 58 | SEG33 | O | |
| 59 | SEG32 | O | |
| 60 | SEG31 | O | |
| 61 | SEG30 | O | |
| 62 | SEG29 | O | |
| 63 | SEG28 | O | |
| 64 | SEG27 | O | |
| 65 | SEG26 | O | |
| 66 | SEG25 | O | |
| 67 | SEG24 | O | |
| 68 | SEG23 | O | |
| 69 | SEG22 | O | |
| 70 | SEG21 | O | |
| 71 | SEG20 | O | |
| 72 | SEG19 | O | |
| 73 | SEG18 | O | |
| 74 | SEG17 | O | |
| 75 | SEG16 | O | |
| 76 | SEG15 | O | |
| 77 | SEG14 | O | |
| 78 | SEG13 | O | |
| 79 | SEG12 | O | |
| 80 | SEG11 | O | |
| 81 | SEG10 | O | |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 82 | SEG9 | O | LCD segment output |
| 83 | SEG8 | O | |
| 84 | SEG7 | O | |
| 85 | SEG6 | O | |
| 86 | SEG5 | O | |
| 87 | SEG4 | O | |
| 88 | SEG3 | O | |
| 89 | SEG2 | O | |
| 90 | SEG1 | O | |
| 91 | SEG0 | O | |
| 92 | COM3 | O | LCD common 3 output |
| 93 | COM2 | O | LCD common 2 output |
| 94 | COM1 | O | LCD common 1 output |
| 95 | COM0 | O | LCD common 0 output |
| 96 | VLC | O | LCD drive power supply |
| 97 | NC | – | No connect |
| 98 | NC | – | No connect |
| 99 | NC | – | No connect |
| 100 | VDD | I | +5V |

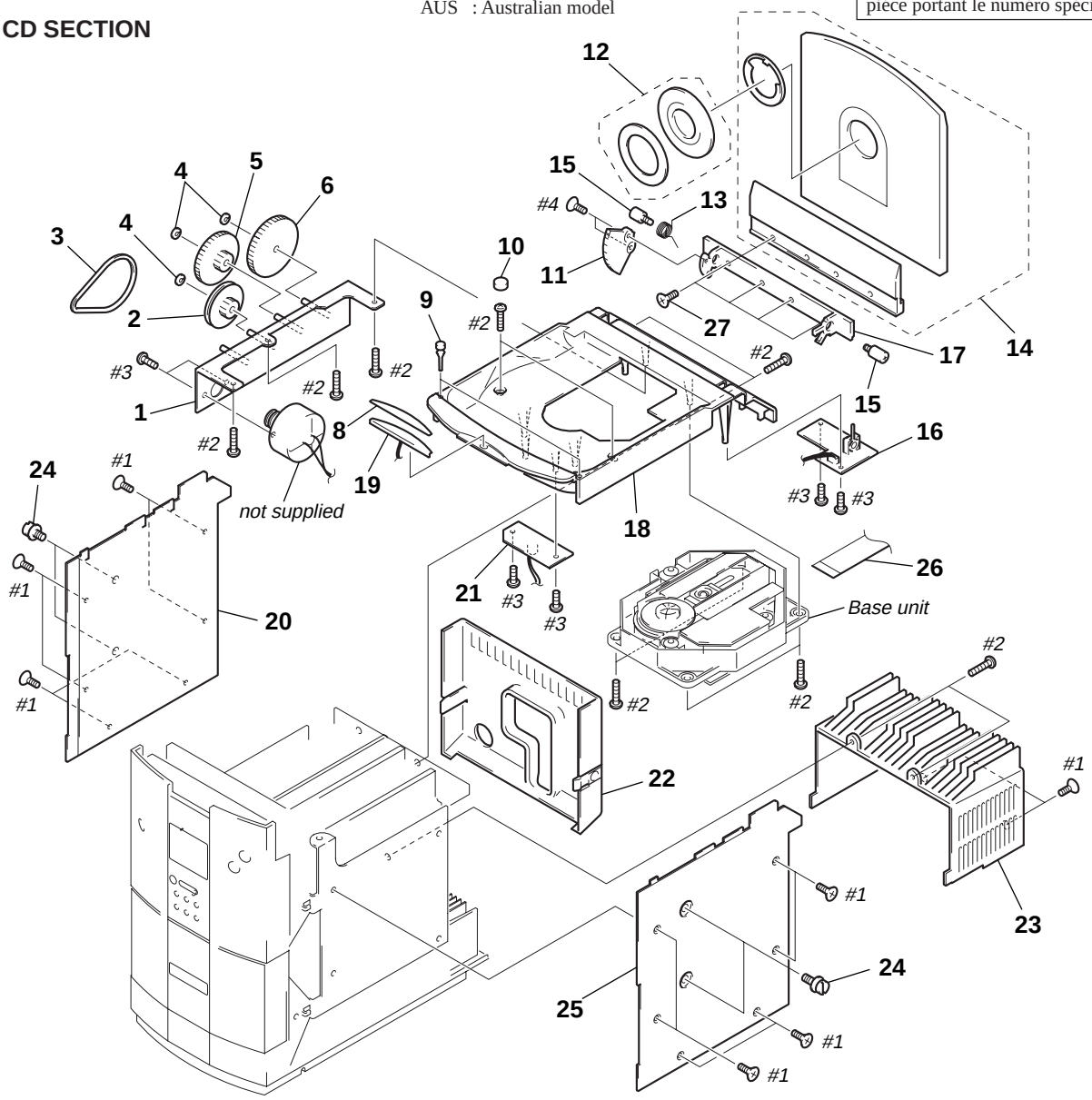
# SECTION 7
# EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  HK : Hong Kong model
  SP : Singapore model
  MY : Malaysia model
  KR : Korean model
  TW : Taiwan model
  AUS : Australian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

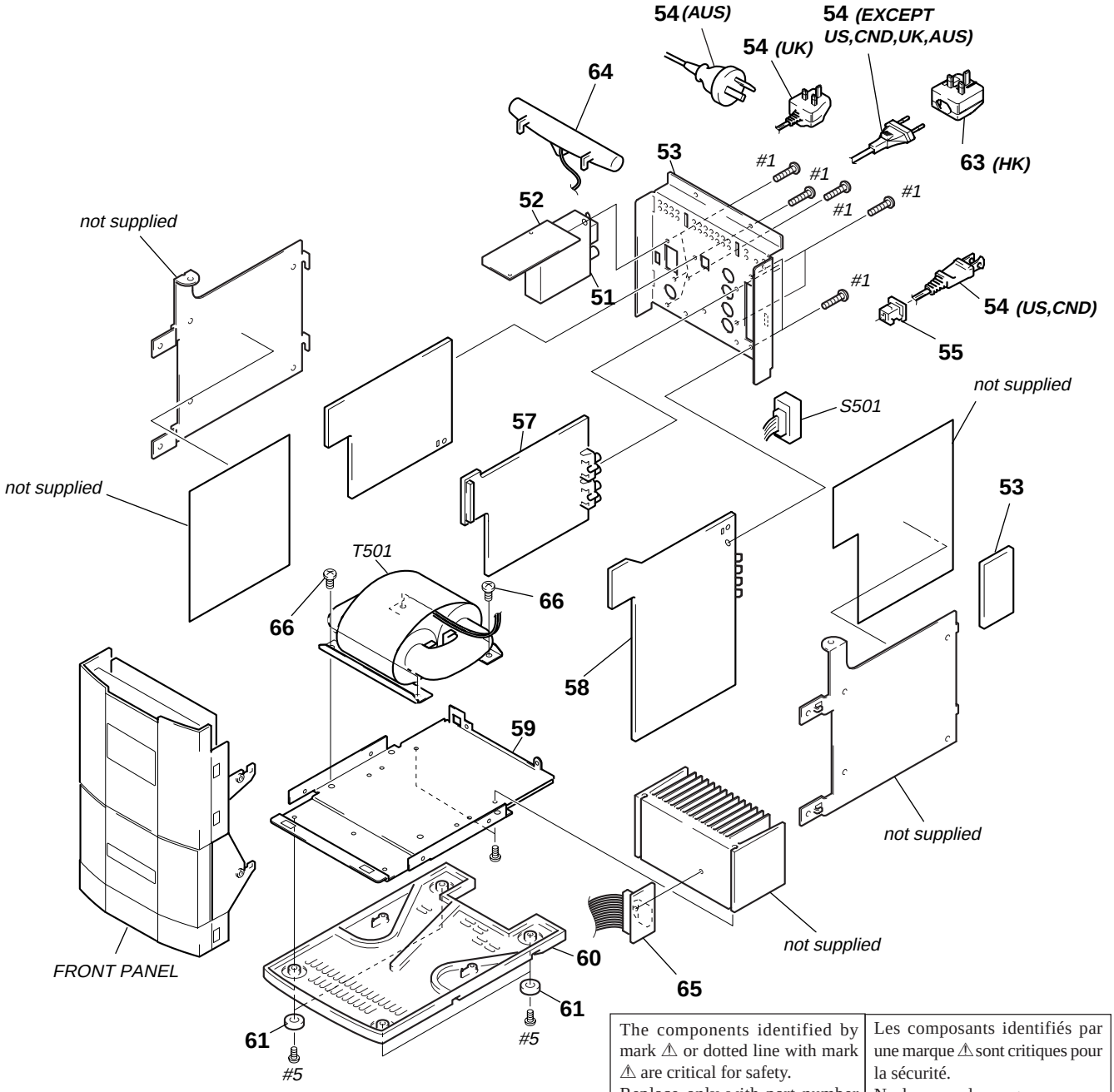
## 7-1. CD SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | 4-225-804-01 | GEAR BRACKET | |
| 2 | 4-225-808-01 | GEAR PULLEY | |
| 3 | 4-225-796-01 | BELT | |
| 4 | 4-225-803-01 | SHAFT WASHER | |
| 5 | 4-225-806-01 | GEAR B | |
| 6 | 4-225-807-01 | GEAR C | |
| 8 | 4-225-809-01 | O/C PLATE | |
| 9 | 4-225-756-01 | DOOR CUSHION | |
| 10 | 4-225-757-01 | DOT | |
| 11 | 4-225-786-01 | DOOR GEAR | |
| 12 | X-4952-474-1 | STABILIZER SUB ASSY | |
| 13 | 4-225-770-01 | SPRING (CD), TORSION | |
| 14 | X-4952-473-1 | DOOR SUB ASSY, GLASS (AEP,UK) | |
| 14 | X-4952-591-1 | DOOR SUB ASSY, GLASS (US,CND) | |
| 14 | X-4952-592-1 | DOOR SUB ASSY, GLASS (MY,SP,HK,KR,TW,AUS) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 15 | 4-225-761-01 | PIN SCREW | |
| 16 | 1-676-334-11 | CD SW BOARD | |
| 17 | 4-225-777-01 | HINGE | |
| 18 | 4-225-810-01 | CD BASE | |
| 19 | 4-225-811-01 | EJECT PLATE | |
| 20 | 4-225-784-01 | SIDE PANEL (L) | |
| 21 | 1-676-335-11 | TOUCH SENSOR BOARD | |
| 22 | 4-225-781-01 | BACK COVER | |
| 23 | 4-225-775-01 | BACK COVER (2) | |
| 24 | 4-225-758-01 | HOOK SCREW | |
| 25 | 4-225-785-01 | SIDE PANEL (R) | |
| 26 | 1-791-960-11 | FFC (184-5GW0145-1A) | |
| 27 | 4-225-760-01 | SCREW +KTT 3x8 | |

## 7-2. REAR PANEL SECTION

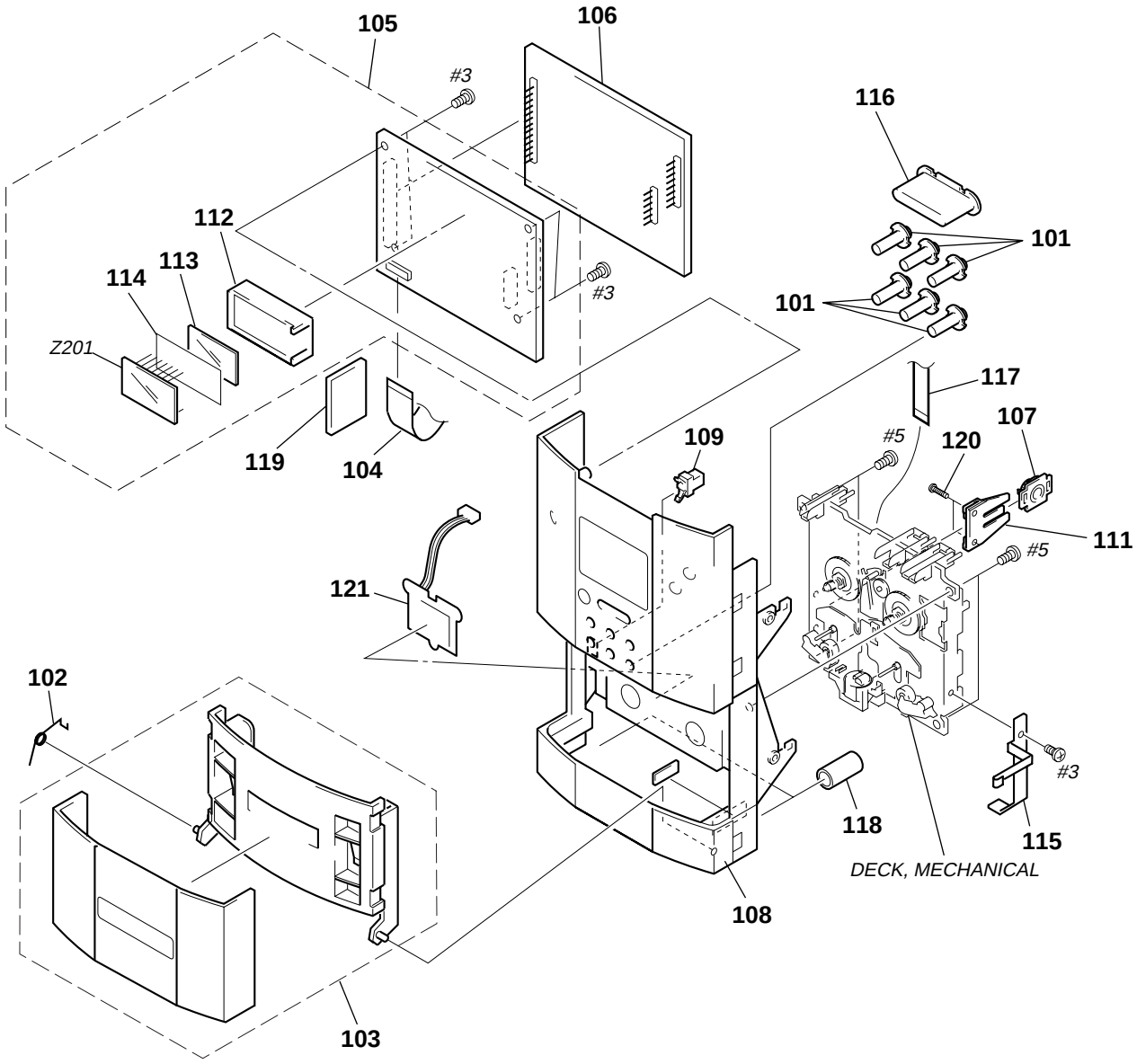



| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |
|---|---|

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 1-693-407-12 | TUNER (US,CND) | |
| 51 | 1-693-408-12 | TUNER (EXCEPT US,CND) | |
| 52 | A-4428-246-A | RDS BOARD, COMLETE (US,CND) | |
| 52 | A-4428-110-A | RDS BOARD, COMLETE (EXCEPT US,CND) | |
| 53 | 4-225-763-01 | BACK BOARD | |
| ⚠54 | 1-696-966-31 | CORD, POWER (AUS) | |
| ⚠54 | 1-555-750-11 | CORD,POWER,EULOPLUG (AEP,MY,SP,HK,KR,TW) | |
| ⚠54 | 1-751-535-11 | CORD, POWER (UK) | |
| ⚠54 | 1-783-531-51 | CORD, POWER (US,CND) | |
| 55 | 4-225-774-01 | AC CORD BUSHING | |
| * 56 | A-4428-109-A | TAPE PREAMP BOARD, COMPLETE | |
| * 57 | A-4428-113-A | FUNCTION BOARD, COMPLETE | |
| 58 | A-4428-245-A | POWER AMP BOARD,COMPRETE (US,CND) | |
| 58 | A-4428-107-A | POWER AMP BOARD,COMPRETE (EXCEPT US,CND) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 59 | 4-225-764-01 | BOTTOM BOARD | |
| 60 | 4-225-780-01 | BOTTOM COVER | |
| 61 | 4-225-795-01 | FOOT | |
| ⚠63 | 1-770-019-11 | ADAPTOR, CONVERSION PLUG 3P (HK) | |
| 64 | X-4949-451-1 | AM ANT SUB ASSY | |
| 65 | 1-676-338-11 | POWER IC BOARD | |
| 66 | 4-225-759-01 | SCREW + BTT4x5 | |
| ⚠T501 | 1-435-317-11 | TRANSFORMER,POWER (200-99Y0283) (US,CND) | |
| ⚠T501 | 1-435-254-11 | TRANSFORMER, POWER (AEP,UK,HK,AUS) | |
| ⚠T501 | 1-435-256-11 | TRANSFORMER,POWER (200-99Y0320) (MY,SP,KR,TW) | |
| ⚠S501 | 1-771-871-11 | SELECTOR,VOLTAGE (202-L16-12A) (MY,SP,KR,TW,HK) | |

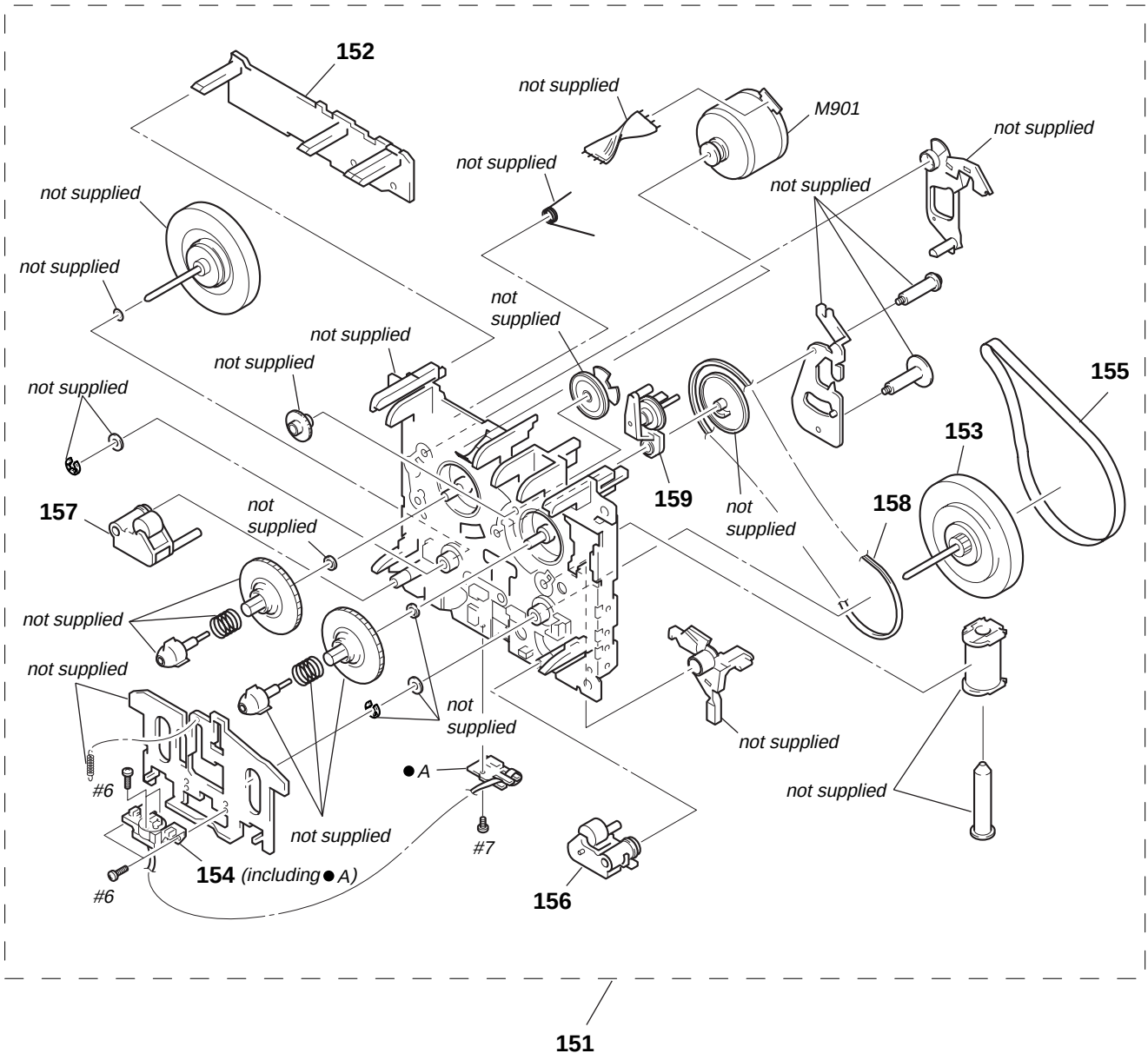
## 7-3. FRONT PANEL SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 4-225-779-01 | PUSH BUTTON | |
| 102 | 4-225-771-01 | SPRING (DOOR), TORSION | |
| 103 | X-4952-472-1 | CASS DOOR SUB ASSY | |
| 104 | 1-791-958-11 | WIRE (FLAT TYPE) (15 CORE) | |
| * 105 | A-4428-104-A | DISPLAY BOARD, COMPLETE (AEP,UK,MY,SP,KR,TW) | |
| * 105 | A-4428-244-A | DISPLAY BOARD, COMPLETE (US,CND) | |
| * 105 | A-4428-248-A | DISPLAY BOARD, COMPLETE (AUS,KR) | |
| * 105 | A-4428-249-A | DISPLAY BOARD, COMPLETE (HK) | |
| * 106 | A-4428-106-A | RELAY BOARD, COMPLETE | |
| 107 | 4-225-789-01 | GEAR DAMPER (GD-21-A) | |
| 108 | X-4952-469-1 | PANEL SUB ASSY, FRONT | |
| 109 | 4-225-790-01 | DOOR LATCH (DL-05T) | |

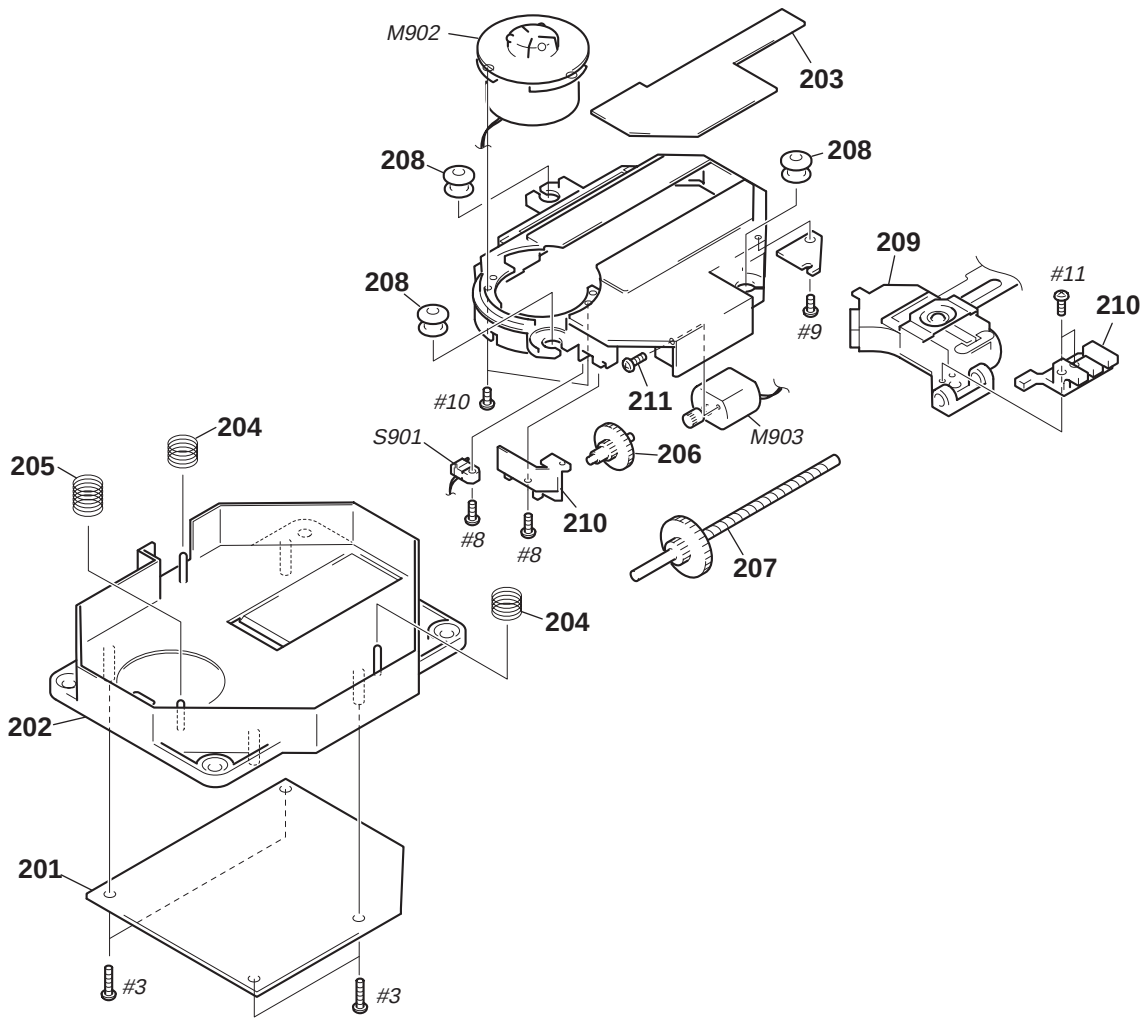
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 111 | 4-225-783-01 | GEAR HOLDER | |
| 112 | 4-225-851-01 | LCD HOLDER | |
| 113 | 4-225-853-01 | LIGHT BAR | |
| 114 | 4-225-852-01 | DISPLAY FILTER | |
| 115 | 4-225-755-01 | SOLDER LUG,WIRE | |
| 116 | 4-225-778-01 | FUNCTION BUTTON | |
| 117 | 1-791-959-11 | FCC (184-F312F5508),12P | |
| 118 | 4-225-782-01 | BOSS | |
| 119 | 1-676-337-11 | LED BOARD | |
| 120 | 4-225-762-01 | SCREW + KTP1.7x6 | |
| 121 | 1-418-482-11 | ILLUMINATION BLOCK,LED | |
| Z201 | 1-793-885-11 | INDICATOR TUBE,FLUORESCENT | |

## 7-4. MECHANISM DECK SECTION (CASSETTE)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 1-772-264-11 | DECK, MECHANICAL | |
| 152 | X-4952-487-1 | CONTROL BLK ASSY | |
| 153 | X-4949-566-1 | CLUTCH BLK ASSY | |
| 154 | X-4952-488-1 | PLATE HD BLK ASSY | |
| 155 | 4-997-983-01 | BELT MAIN | |
| 156 | X-4949-568-1 | ROLLER PINCH BLK R ASSY | |
| 157 | X-4949-569-1 | ROLLER PINCH BLK L ASSY | |
| 158 | 4-997-984-01 | F/R BELT | |
| 159 | X-4949-567-1 | CLUTCH BLK2 ASSY | |
| M901 | X-4952-489-1 | MTR MAIN BLK ASSY (CAPSTAN/REEL) | |

## 7-5. BASE UNIT SECTION (CDM-61)




| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une piéce portant le numéro spécifié. |
|---|---|

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 201 | A-4428-103-A | BD BOARD, COMPLETEQ | |
| 202 | 4-225-776-01 | BU HOLDER | |
| 203 | 4-225-791-01 | COLOR PLATE | |
| 204 | 4-225-769-01 | SPRING (BBU) ,COMPRESSION | |
| 205 | 4-225-768-01 | SPRING (FBU) ,COMPRESSION | |
| 206 | 2-625-410-01 | GEAR (B) | |
| 207 | X-2625-483-1 | SCREW ASSY, SLED | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 208 | 4-962-370-01 | INSULATOR | |
| ⚠209 | 8-848-289-01 | OPTICAL PICK-UP KSS-331A (RP) | |
| 210 | 2-625-414-04 | RACK | |
| 211 | 3-732-988-01 | SCREW (M2x2.5) | |
| M902 | X-2625-171-1 | MOTOR ASSY (SLED) | |
| M903 | X-2625-911-1 | MOTOR ASSY (TT) | |
| S901 | 1-762-571-11 | SWITCH | |

**AC IN** **BD**

# SECTION 8
# ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  CND : Canadian model
  MY : Malaysia model
  SP : Singapore model
  KR : Korean model
  TW : Taiwan model
  AUS : Australian model
  HK : Hong Kong model

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | 1-676-526-11 | AC IN BOARD | | | (US,CND,AEP,UK) |
| | | ********** | | | |
| | | < RESISTOR > | | | |
| ⚠R551 | 1-202-725-00 | SOLID | 3.3M | 10% | 1/2W (US,CND,AEP,UK) |
| ********** | | | | | |
| | A-4428-103-A | BD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C102 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C103 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C104 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C108 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C109 | 1-163-011-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C110 | 1-164-182-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V |
| C111 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C112 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C113 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C114 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C115 | 1-126-607-11 | ELECT CHIP | 47uF | 20% | 4V |
| C116 | 1-126-607-11 | ELECT CHIP | 47uF | 20% | 4V |
| C117 | 1-126-209-11 | ELECT CHIP | 100uF | 20% | 4V |
| C118 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C119 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C121 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C122 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C123 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C124 | 1-107-823-11 | CERAMIC CHIP | 0.47uF | 10% | 16V |
| C125 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C126 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C127 | 1-128-065-11 | ELECT CHIP | 68uF | 20% | 10V |
| C128 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C129 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C130 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C131 | 1-124-779-00 | ELECT CHIP | 10uF | 20% | 16V |
| C133 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C134 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C135 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C136 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C140 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C141 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C143 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C151 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C153 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C154 | 1-110-501-11 | CERAMIC CHIP | 0.33uF | 10% | 16V |
| C156 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C157 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C159 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C161 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C162 | 1-126-205-11 | ELECT CHIP | 47uF | 20% | 6.3V |
| C163 | 1-126-206-11 | ELECT CHIP | 100uF | 20% | 6.3V |
| C165 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C167 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C168 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C171 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C172 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V |
| C181 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C182 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V |
| | | < CONNECTOR > | | | |
| CNU101 | 1-793-441-21 | CONNECTOR, FFC/FPC 18P | | | |
| CNU102 | 1-770-013-11 | CONNECTOR, FFC/FPC 19P | | | |
| CNU103 | 1-566-757-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| CNU104 | 1-566-757-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| CNU105 | 1-566-757-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| | | < FERRITE BEAD > | | | |
| FB101 | 1-500-445-21 | FERRITE | 0UH | | |
| FB102 | 1-216-295-91 | SHORT | 0 | | |
| FB103 | 1-500-445-21 | FERRITE | 0UH | | |
| FB104 | 1-216-295-91 | SHORT | 0 | | |
| | | < IC > | | | |
| IC101 | 8-752-386-85 | IC CXD2587Q | | | |
| IC102 | 8-759-549-28 | IC BA5974FP-E2 | | | |
| IC103 | 8-752-085-51 | IC CXA2568M-T6 | | | |
| | | < TRANSISTOR > | | | |
| Q101 | 8-729-010-08 | TRANSISTOR | MSB710-RT1 | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < RESISTOR > | | | |
| R101 | 1-216-077-91 | RES,CHIP | 15K | 5% | 1/10W |
| R102 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R103 | 1-216-077-91 | RES,CHIP | 15K | 5% | 1/10W |
| R104 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R105 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R106 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R107 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R108 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R109 | 1-216-121-91 | RES,CHIP | 1M | 5% | 1/10W |
| R110 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R111 | 1-216-121-91 | RES,CHIP | 1M | 5% | 1/10W |
| R113 | 1-216-121-91 | RES,CHIP | 1M | 5% | 1/10W |
| R114 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R116 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R117 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R119 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R123 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R124 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R131 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R135 | 1-216-295-91 | SHORT | 0 | | |
| R136 | 1-216-295-91 | SHORT | 0 | | |
| R137 | 1-216-295-91 | SHORT | 0 | | |
| R138 | 1-216-295-91 | SHORT | 0 | | |
| R139 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R143 | 1-216-103-00 | METAL CHIP | 180K | 5% | 1/10W |
| R144 | 1-216-103-00 | METAL CHIP | 180K | 5% | 1/10W |
| R147 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R148 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R149 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R158 | 1-216-111-00 | METAL CHIP | 390K | 5% | 1/10W |
| R159 | 1-216-101-00 | METAL CHIP | 150K | 5% | 1/10W |
| R161 | 1-216-308-00 | METAL CHIP | 4.7 | 5% | 1/10W |
| R162 | 1-216-101-00 | METAL CHIP | 150K | 5% | 1/10W |
| R171 | 1-216-078-00 | RES,CHIP | 16K | 5% | 1/10W |
| R172 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R173 | 1-216-077-91 | RES,CHIP | 15K | 5% | 1/10W |
| R181 | 1-216-078-00 | RES,CHIP | 16K | 5% | 1/10W |
| R182 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R183 | 1-216-077-91 | RES,CHIP | 15K | 5% | 1/10W |
| | | < RESISTOR > | | | |
| RN101 | 1-233-412-11 | RES, CHIP NETWORK 1.0K (3216) | | | |
| RN102 | 1-233-576-11 | RES, CHIP NETWORK 100 | | | |
| | | < VIBRATOR > | | | |
| X101 | 1-767-408-21 | VIBRATOR, CRYSTAL (16.9344MHz) | | | |
| ********** | | | | | |
| | 1-676-334-11 | CD SW BOARD | | | |
| | | ********** | | | |
| | | < SWITCH > | | | |
| SW601 | 1-571-300-21 | SWITCH, ROTARY (CD DOOR SWITCH) | | | |
| ********** | | | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-4428-104-A | DISPLAY BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | | | | (AEP,UK,MY,SP,KR,TW) |
| | A-4428-244-A | DISPLAY BOARD, COMPLETE (US,CND) | | | |
| | | ********** | | | |
| | A-4428-248-A | DISPLAY BOARD, COMPLETE (AUS) | | | |
| | | ********** | | | |
| | A-4428-249-A | DISPLAY BOARD, COMPLETE (HK) | | | |
| | | ********** | | | |
| | 4-225-851-01 | LCD HOLDER | | | |
| | 4-225-852-01 | DISPLAY FILTER | | | |
| | 4-225-853-01 | LIGHT BAR | | | |
| | | < CAPACITOR > | | | |
| C121 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C200 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C201 | 1-102-962-00 | CERAMIC | 30PF | 5% | 50V |
| C202 | 1-102-953-00 | CERAMIC | 18PF | 5% | 50V |
| C203 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C204 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C205 | 1-126-916-11 | ELECT | 1000uF | 20% | 6.3V |
| C206 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C207 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C208 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C209 | 1-162-901-11 | CERAMIC | 0.1uF | 99% | 50V |
| C213 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C220 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C232 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C233 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C234 | 1-163-031-11 | CERAMIC CHIP | 0.01uF | | 50V |
| | | < CONNECTOR > | | | |
| CN1 | 1-784-737-11 | CONNECTOR, FFC 15P | | | |
| M201 | 1-793-882-11 | CONNECTOR (197-K310-07) | | | |
| M202 | 1-793-883-11 | CONNECTOR (197-K310-14) | | | |
| M203 | 1-793-884-11 | CONNECTOR (197-K310-25) | | | |
| | | < DIODE > | | | |
| D201 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D202 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D203 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D210 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D211 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D212 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D216 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| | | < IC > | | | |
| IC201 | 8-759-653-24 | IC TMP87CM23F-1C04 | | | |
| IC202 | 8-742-132-00 | HYB IC SBX1976-51P | | | |
| IC203 | 8-759-165-80 | IC PST600C-T | | | |
| | | < COIL > | | | |
| L201 | 1-410-521-11 | INDUCTOR | 100uH | | |

## DISPLAY FUNCTION

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < TRANSISTOR > | | | |
| Q201 | 8-729-230-49 | TRANSISTOR | 2SC2712G-TE85L | | |
| Q216 | 8-729-230-49 | TRANSISTOR | 2SC2712G-TE85L | | |
| | | < RESISTOR > | | | |
| R200 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R201 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R202 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W F |
| R203 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R204 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R205 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R206 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R208 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R209 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R210 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R211 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R212 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R222 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R225 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R226 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R227 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R229 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R230 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R239 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R240 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R246 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R247 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R248 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R250 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R253 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F (US,CND,AEP,UK,MY,SP,KR,TW,AUS) |
| R254 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W F (US,CND) |
| R254 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W F (AEP,UK,MY,SP,KR,TW) |
| R254 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W F (AUS) |
| R255 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R256 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W F |
| R257 | 1-216-039-00 | METAL CHIP | 390 | 5% | 1/10W |
| R258 | 1-216-043-91 | RES,CHIP | 560 | 5% | 1/10W |
| R259 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W |
| R260 | 1-216-046-00 | METAL CHIP | 750 | 5% | 1/10W |
| R261 | 1-216-047-91 | RES,CHIP | 820 | 5% | 1/10W |
| R262 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W F |
| R263 | 1-216-053-00 | METAL CHIP | 1.5K | 5% | 1/10W |
| R270 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W F |
| R272 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R274 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R275 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R276 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R277 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R278 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R279 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R280 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R281 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R282 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R283 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R284 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R285 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R286 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R287 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R290 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R293 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R294 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R297 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R210A | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R210B | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R246A | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R247A | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R248A | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| | | < SWITCH > | | | |
| S200 | 1-571-760-11 | SWITCH, KEY BOARD (I/⏻) | | | |
| S201 | 1-571-760-11 | SWITCH, KEY BOARD (VOL+) | | | |
| S202 | 1-571-760-11 | SWITCH, KEY BOARD (VOL-) | | | |
| S203 | 1-571-760-11 | SWITCH, KEY BOARD (TUNING+/⏮◀◀) | | | |
| S204 | 1-571-760-11 | SWITCH, KEY BOARD (TUNING-/▶▶⏭) | | | |
| S205 | 1-571-760-11 | SWITCH, KEY BOARD (FM/►) | | | |
| S206 | 1-571-760-11 | SWITCH, KEY BOARD (AM/◄) | | | |
| S207 | 1-571-760-11 | SWITCH, KEY BOARD (■) | | | |
| S208 | 1-571-760-11 | SWITCH, KEY BOARD (❚❚) | | | |
| S209 | 1-571-760-11 | SWITCH, KEY BOARD (FUNCTION) | | | |
| | | < VIBRATOR > | | | |
| X201 | 1-781-705-11 | OSCILLATOR, CRYSTAL (131-8MHZ) (8MHz) | | | |
| | | < FLUORESCENT INDICATOR TUBE > | | | |
| Z201 | 1-793-885-11 | INDICATOR TUBE, FLUORESCENT | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | A-4428-113-A | FUNCTION BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C307 | 1-163-275-11 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C308 | 1-163-275-11 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C310 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C311 | 1-130-471-00 | MYLAR | 0.001uF | 5% | 50V |
| C312 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C313 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C314 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C315 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C316 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C317 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |
| C318 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |
| C319 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C320 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C321 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C322 | 1-124-997-11 | ELECT | 470uF | 20% | 10V |
| C323 | 1-124-997-11 | ELECT | 470uF | 20% | 10V |
| C324 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C325 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C326 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C327 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C331 | 1-163-006-11 | CERAMIC CHIP | 560PF | 10% | 50V |
| C332 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C333 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C334 | 1-130-487-00 | MYLAR | 0.022uF | 5% | 50V |
| C335 | 1-130-488-00 | MYLAR | 0.027uF | 5% | 50V |
| C336 | 1-136-174-00 | MYLAR | 0.56uF | 5% | 50V |
| C337 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C338 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C340 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C341 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C342 | 1-130-493-00 | MYLAR | 0.068uF | 5% | 50V |
| C343 | 1-136-174-00 | MYLAR | 0.56uF | 5% | 50V |
| C344 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C345 | 1-130-488-00 | MYLAR | 0.027uF | 5% | 50V |
| C346 | 1-130-487-00 | MYLAR | 0.022uF | 5% | 50V |
| C347 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C348 | 1-130-471-00 | MYLAR | 0.001uF | 5% | 50V |
| C349 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C350 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C351 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C355 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C361 | 1-130-472-00 | MYLAR | 0.0012uF | 5% | 50V |
| C362 | 1-130-477-00 | MYLAR | 0.0033uF | 5% | 50V |
| C363 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C364 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C369 | 1-130-472-00 | MYLAR | 0.0012uF | 5% | 50V |
| C370 | 1-130-477-00 | MYLAR | 0.0033uF | 5% | 50V |
| C373 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C374 | 1-136-173-00 | MYLAR | 0.47uF | 5% | 50V |
| C375 | 1-136-173-00 | MYLAR | 0.47uF | 5% | 50V |
| C376 | 1-124-259-11 | ELECT | 4.7uF | 20% | 35V |
| C377 | 1-124-259-11 | ELECT | 4.7uF | 20% | 35V |
| C378 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C379 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C380 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C381 | 1-136-165-00 | MYLAR | 0.1uF | 5% | 50V |
| C382 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C383 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C384 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C385 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C386 | 1-126-024-11 | ELECT | 220uF | 20% | 16V |
| C387 | 1-126-052-11 | ELECT | 100uF | 20% | 16V |
| C388 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C389 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C390 | 1-126-052-11 | ELECT | 100uF | 20% | 16V |
| C391 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C392 | 1-163-006-11 | CERAMIC CHIP | 560PF | 10% | 50V |
| | | < CONNECTOR > | | | |
| * M301 | 1-766-719-11 | CONNECTOR, BOARD TO BOARD 10P | | | |
| M302 | 1-573-827-11 | CONNECTOR, BOARD TO BOARD 13P | | | |
| | | < DIODE > | | | |
| D301 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D302 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D303 | 8-719-031-85 | DIODE 1N4002L | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC301 | 8-759-495-85 | IC M62442FP-A | | | |
| IC302 | 8-759-711-85 | IC NJM4580E-D-TE2 | | | |
| IC305 | 8-759-261-93 | IC NJM4580LD | | | |
| | | < JACK > | | | |
| JK301 | 1-793-889-11 | JACK, PIN 2P (203-RJ1031A) (MD IN) | | | |
| JK302 | 1-793-889-11 | JACK, PIN 2P (203-RJ1031A) (MD OUT) | | | |
| | | < COIL > | | | |
| L301 | 1-408-080-00 | INDUCTOR | 100uH | | |
| | | < TRANSISTOR > | | | |
| Q301 | 8-729-141-30 | TRANSISTOR | 2SC2878A-TPE2 | | |
| Q302 | 8-729-141-30 | TRANSISTOR | 2SC2878A-TPE2 | | |
| Q303 | 8-729-216-22 | TRANSISTOR | 2SA1162G-TE85L | | |
| Q304 | 8-729-141-30 | TRANSISTOR | 2SC2878A-TPE2 | | |
| Q305 | 8-729-141-30 | TRANSISTOR | 2SC2878A-TPE2 | | |
| Q306 | 8-729-216-22 | TRANSISTOR | 2SA1162G-TE85L | | |
| | | < RESISTOR > | | | |
| R301 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R302 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R303 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R304 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R305 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R306 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R307 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R308 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R311 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R312 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R313 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R314 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R315 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R316 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R317 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R318 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R321 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R322 | 1-216-121-91 | RES,CHIP | 1M | 5% | 1/10W |
| R323 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R324 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R325 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R326 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R327 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R329 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R330 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R331 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R332 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R333 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R334 | 1-216-101-00 | METAL CHIP | 150K | 5% | 1/10W |
| R335 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F |
| R336 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R337 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R338 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R339 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R340 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R341 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R342 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R344 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W F |
| R345 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R346 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R347 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F |
| R348 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R353 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R354 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F |
| R361 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R363 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R364 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R365 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R366 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R374 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R375 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R376 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R377 | 1-247-895-91 | CARBON | 470K | 5% | 1/4W |
| R378 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R379 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R380 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R381 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R382 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R383 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R384 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R385 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R386 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R387 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R388 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R389 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R390 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R391 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R392 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R393 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R394 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R397 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W F |
| R398 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |

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1-676-337-11 LED BOARD
**********

< DIODE >

| | | |
|---|---|---|
| LD201 | 8-719-064-63 | DIODE SELU5823A-TP15 (BACK LIGHT) |
| LD203 | 8-719-064-63 | DIODE SELU5823A-TP15 (BACK LIGHT) |

< RESISTOR >

| | | | | | |
|---|---|---|---|---|---|
| R240A | 1-249-403-11 | CARBON | 68 | 5% | 1/4W F |
| R240B | 1-249-403-11 | CARBON | 68 | 5% | 1/4W F |

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A-4428-245-A POWER AMP BOARD, COMPLETE
**********
(US,CND)

A-4428-107-A POWER AMP BOARD, COMPLETE
**********
(AEP,UK,MY,SP,HK,KR,TW,AUS)

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | 7-685-872-09 | SCREW +BVTT 3X8 (S) | | | |
| | 1-533-293-11 | FUSE HOLDER | | | |
| | | < CAPACITOR > | | | |
| C19 | 1-125-972-91 | ELECT | 100uF | 20% | 16V |
| C20 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C21 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C22 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C23 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C24 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C25 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C26 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C27 | 1-126-860-11 | ELECT | 3300uF | 20% | 35V |
| C28 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C29 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C30 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C31 | 1-126-860-11 | ELECT | 3300uF | 20% | 35V |
| C32 | 1-104-661-91 | ELECT | 330uF | 20% | 16V |
| C33 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C34 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C35 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C36 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C37 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C38 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (AEP,UK,MY,SP,HK,KR,TW,AUS) |
| C39 | 1-130-499-00 | MYLAR | 0.22uF | 5% | 50V |
| C40 | 1-130-499-00 | MYLAR | 0.22uF | 5% | 50V |
| C41 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C42 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C43 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C44 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C45 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C46 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C502 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C503 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C508 | 1-104-664-11 | ELECT | 47uF | 20% | 25V |
| C509 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C510 | 1-126-943-11 | ELECT | 2200uF | 20% | 25V |
| C511 | 1-126-941-11 | ELECT | 470uF | 20% | 25V |
| C512 | 1-104-653-11 | ELECT | 220uF | 20% | 16V |
| C513 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C514 | 1-125-972-91 | ELECT | 100uF | 20% | 16V |
| C515 | 1-125-972-91 | ELECT | 100uF | 20% | 16V |
| C516 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C517 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| C518 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| C520 | 1-104-652-11 | ELECT | 470uF | 20% | 10V |
| C521 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C522 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C523 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C524 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| C526 | 1-104-652-11 | ELECT | 470uF | 20% | 10V |
| C527 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C530 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C531 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| C532 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C538 | 1-163-035-00 | CERAMIC CHIP | 0.047uF | 50V | |
| C539 | 1-163-035-00 | CERAMIC CHIP | 0.047uF | 50V | |
| C540 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C541 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C542 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C543 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C999 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| | | < CONNECTOR > | | | |
| M501 | 1-784-040-11 | CONNECTOR, BOARD TO BOARD 19P | | | |
| * M502 | 1-564-674-11 | PIN, CONNECTOR 8P | | | |
| * M503 | 1-506-984-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| * M504 | 1-568-790-11 | PIN, CONNECTOR 13P | | | |
| | | < DIODE > | | | |
| D1 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D2 | 8-719-937-56 | DIODE RLS-73-TE-11 | | | |
| D3 | 8-719-031-85 | DIODE 1N4002L | | | |
| D4 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D502 | 8-719-067-67 | DIODE W02G | | | |
| D503 | 8-719-921-88 | DIODE MTZJ-T-77-13B | | | |
| D504 | 8-719-110-31 | DIODE MTZJ-T-77-12C | | | |
| D506 | 8-719-053-18 | DIODE 1SR154-400TE-25 | | | |
| D507 | 8-719-110-03 | DIODE MTZJ-T-77-7.5C | | | |
| D515 | 8-719-077-63 | DIODE 1N5402 | | | |
| D516 | 8-719-077-63 | DIODE 1N5402 | | | |
| D517 | 8-719-077-63 | DIODE 1N5402 | | | |
| D518 | 8-719-077-63 | DIODE 1N5402 | | | |
| D519 | 8-719-053-18 | DIODE 1SR154-400TE-25 | | | |
| D520 | 8-719-053-18 | DIODE 1SR154-400TE-25 | | | |
| | | < FUSE > | | | |
| ⚠F501 | 1-533-419-11 | FUSE, GLASS CYLINDRICAL(DIA.5) (4A/125V) (US,CND) | | | |
| ⚠F501 | 1-532-237-00 | FUSE (T3.15A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ⚠F502 | 1-533-419-11 | FUSE, GLASS CYLINDRICAL(DIA.5) (4A/125V) (US,CND) | | | |
| ⚠F502 | 1-532-237-00 | FUSE (T3.15A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ⚠F503 | 1-532-742-11 | FUSE, GLASS CYLINDERICAL (1.6A/125V) (US,CND) | | | |
| ⚠F503 | 1-532-259-00 | FUSE (T1.6A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ⚠F504 | 1-532-742-11 | FUSE, GLASS CYLINDERICAL (1.6A/125V) (US,CND) | | | |
| ⚠F504 | 1-532-259-00 | FUSE (T1.6A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ⚠F505 | 1-532-742-11 | FUSE, GLASS CYLINDERICAL (1.6A/125V) (US,CND) | | | |
| ⚠F505 | 1-532-259-00 | FUSE (T1.6A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ⚠F506 | 1-532-742-11 | FUSE, GLASS CYLINDERICAL (1.6A/125V) (US,CND) | | | |
| ⚠F506 | 1-532-259-00 | FUSE (T1.6A/250V) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC501 | 8-759-701-57 | IC NJM78M06FA | | | |
| IC505 | 8-759-288-53 | IC LA5617 | | | |
| | | < COIL > | | | |
| L1 | 1-420-872-00 | COIL, AIR CORE (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| L2 | 1-420-872-00 | COIL, AIR CORE (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| | | < TRANSISTOR > | | | |
| Q1 | 8-729-200-36 | TRANSISTOR | 2SA966-Y | | |
| Q2 | 8-729-201-53 | TRANSISTOR | 2SA1015TP-GR | | |
| Q3 | 8-729-201-53 | TRANSISTOR | 2SA1015TP-GR | | |
| Q4 | 8-729-265-52 | TRANSISTOR | 2SC2655-Y(TPE6) | | |
| Q6 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q501 | 8-729-230-49 | TRANSISTOR | 2SC2712G-TE85L | | |
| Q502 | 8-729-216-22 | TRANSISTOR | 2SA1162G-TE85L | | |
| Q503 | 8-729-201-53 | TRANSISTOR | 2SA1015TP-GR | | |
| Q504 | 8-729-209-15 | TRANSISTOR | 2SD2012 | | |
| Q505 | 8-729-017-51 | TRANSISTOR | 2SB632K-E | | |
| Q506 | 8-729-281-53 | TRANSISTOR | 2SC1815-GR | | |
| Q507 | 8-729-188-23 | TRANSISTOR | 2SD882-P | | |
| Q508 | 8-729-188-23 | TRANSISTOR | 2SD882-P | | |
| Q510 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| | | < RESISTOR > | | | |
| R22 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R23 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R24 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R25 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R26 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R27 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R28 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R29 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R31 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R32 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W |
| R33 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R34 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R35 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R36 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R37 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R38 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F |
| R39 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W F |
| R40 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W F |
| R41 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W F |
| R42 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R43 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R44 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R45 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W |
| R46 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R47 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R48 | 1-260-076-11 | CARBON | 10 (AEP,UK,MY,SP,HK,KR,TW,AUS) | 5% | 1/2W |
| R49 | 1-260-076-11 | CARBON | 10 (AEP,UK,MY,SP,HK,KR,TW,AUS) | 5% | 1/2W |
| R50 | 1-249-386-11 | CARBON | 2.7 (AEP,UK,MY,SP,HK,KR,TW,AUS) | 5% | 1/6W F |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une piéce portant le numéro spécifié. |

## POWER AMP | POWER IC | RDS

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R51 | 1-249-386-11 | CARBON | 2.7 | 5% | 1/6W F |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R30A | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| R30B | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| ⚠R501 | 1-216-373-11 | METAL OXIDE | 2.2 | 5% | 2W F |
| ⚠R502 | 1-216-355-11 | METAL OXIDE | 3.3 | 5% | 1W F |
| R503 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R504 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R505 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R506 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R507 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R508 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R509 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R510 | 1-215-869-11 | METAL OXIDE | 1K | 5% | 1W F |
| R511 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W |
| R512 | 1-216-077-91 | RES,CHIP | 15K | 5% | 1/10W |
| R515 | 1-215-860-11 | METAL OXIDE | 33 | 5% | 1W F |
| R516 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| ⚠R517 | 1-216-355-11 | METAL OXIDE | 3.3 | 5% | 1W F |
| R518 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| | | < RESISTOR > | | | |
| RX1 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| | | < RELAY > | | | |
| RY1 | 1-755-067-11 | RELAY | | | |
| RY501 | 1-755-067-11 | RELAY | | | |
| | | < TERMINAL > | | | |
| TM501 | 1-694-645-11 | TERMINAL, SPEAKER | | | |

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|---|---|---|---|---|---|
| | 1-676-338-11 | POWER IC BOARD | | | |
| | | ********** | | | |
| | | < IC > | | | |
| IC5 | 8-759-333-24 | IC LM1876TF | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | A-4428-110-A | RDS BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| | A-4428-246-A | RDS BOARD, COMPLETE (US,CND) | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C401 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C402 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C403 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C404 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C405 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C421 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C423 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C451 | 1-124-257-00 | ELECT | 2.2uF | 20% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C452 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C453 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C454 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C455 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C456 | 1-102-518-11 | CERAMIC | 33PF | 5% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| C457 | 1-102-518-11 | CERAMIC | 33PF | 5% | 50V |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| | | < CONNECTOR > | | | |
| M401 | 1-774-289-11 | PIN, CONNECTOR (PC BOARD) 15P | | | |
| M451 | 1-784-776-11 | CONNECTOR, FFC 15P | | | |
| | | < IC > | | | |
| IC451 | 8-759-450-86 | IC BU1922 (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| | | < CO2IL > | | | |
| L401 | 1-410-521-11 | INDUCTOR | 100uH | | |
| L402 | 1-410-521-11 | INDUCTOR | 100uH | | |
| L403 | 1-410-521-11 | INDUCTOR | 100uH | | |
| L404 | 1-410-521-11 | INDUCTOR | 100uH | | |
| L405 | 1-410-521-11 | INDUCTOR | 100uH | | |
| | | < TRANSISTOR > | | | |
| Q450 | 8-729-620-05 | TRANSISTOR | 2SC2603TP-EF | | |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| | | < RESISTOR > | | | |
| R401 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R402 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R403 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R404 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R405 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R406 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R408 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R409 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R410 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R411 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R452 | 1-259-880-11 | CARBON | 2.2M | 5% | 1/4W |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R453 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R454 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |
| R455 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| | | | (AEP,UK,MY,SP,HK,KR,TW,AUS) | | |

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|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une piéce portant le numéro spécifié. |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < VIBRATOR > | | | |
| X451 | 1-579-900-21 | VIBRATOR, CRYSTAL (4.332MHz) (AEP,UK,MY,SP,HK,KR,TW,AUS) | | | |
| ********** | | | | | |
| | A-4428-106-A | RELAY BOARD, COMPLETE ********** | | | |
| | | < CAPACITOR > | | | |
| C210 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C211 | 1-126-935-11 | ELECT | 470uF | 20% | 16V |
| C214 | 1-124-997-11 | ELECT | 470uF | 20% | 10V |
| C217 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C218 | 1-126-927-11 | ELECT | 2200uF | 20% | 10V |
| C229 | 1-101-001-00 | CERAMIC | 0.001uF | 50V | |
| C235 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C236 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C241 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| C242 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| C245 | 1-162-851-11 | CERAMIC | 0.1uF | 10% | 16V |
| C246 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V |
| C650 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C651 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C652 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| C653 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C654 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C655 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C797 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C798 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C799 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| | | < CONNECTOR > | | | |
| CN102 | 1-770-167-11 | CONNECTOR, FFC/FPC 19P | | | |
| CN601 | 1-791-970-11 | CORD (197-2P/PH) | | | |
| M3011 | 1-766-715-21 | CONNECTOR, BOARD TO BOARD 10P | | | |
| M3012 | 1-573-845-11 | CONNECTOR, BOARD TO BOARD 13P | | | |
| M7031 | 1-573-845-11 | CONNECTOR, BOARD TO BOARD 13P | | | |
| M7032 | 1-766-715-21 | CONNECTOR, BOARD TO BOARD 10P | | | |
| | | < DIODE > | | | |
| D200 | 8-719-031-85 | DIODE 1N4002L | | | |
| D206 | 8-719-031-85 | DIODE 1N4002L | | | |
| D207 | 8-719-031-85 | DIODE 1N4002L | | | |
| D213 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D214 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D215 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D217 | 8-719-929-15 | DIODE RD9.1ESB2 | | | |
| D650 | 8-719-110-31 | DIODE RD12ESB2 | | | |
| D651 | 8-719-110-31 | DIODE RD12ESB2 | | | |
| D652 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D770 | 8-719-031-85 | DIODE 1N4002L | | | |
| D771 | 8-719-031-85 | DIODE 1N4002L | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC650 | 8-759-925-80 | IC SN74HC14ANS-E05 | | | |
| IC651 | 8-759-925-90 | IC SN74HC74ANS-E05 | | | |
| | | < COIL > | | | |
| L202 | 1-410-517-11 | INDUCTOR | 47uH | | |
| | | < TRANSISTOR > | | | |
| Q202 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q203 | 8-729-200-36 | TRANSISTOR | 2SA966-Y | | |
| Q204 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q205 | 8-729-027-31 | TRANSISTOR | DTA124EKA-T146 | | |
| Q770 | 8-729-200-36 | TRANSISTOR | 2SA966-Y | | |
| Q771 | 8-729-200-36 | TRANSISTOR | 2SA966-Y | | |
| Q772 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| Q773 | 8-729-901-00 | TRANSISTOR | DTC124EKA-T146 | | |
| | | < RESISTOR > | | | |
| R206 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R207 | 1-216-051-00 | METAL CHIP | 1.2K | 5% | 1/10W |
| R213 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R214 | 1-216-063-91 | RES,CHIP | 3.9K | 5% | 1/10W |
| R215 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R216 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R218 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R219 | 1-216-025-91 | RES, CHIP | 100 | 5% | 1/10W |
| R220 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R224 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R225 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R231 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R232 | 1-216-093-91 | RES,CHIP | 68K | 5% | 1/10W |
| R233 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R234 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R235 | 1-216-065-91 | RES,CHIP | 4.7K | 5% | 1/10W |
| R236 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| ⚠R237 | 1-215-860-11 | METAL OXIDE | 33 | 5% | 1W F |
| R653 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R654 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R655 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R656 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R657 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R774 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R775 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R776 | 1-216-051-00 | METAL CHIP | 1.2K | 5% | 1/10W |
| R777 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W F |
| R231A | 1-216-063-91 | RES,CHIP | 3.9K | 5% | 1/10W |
| R231B | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R233A | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| | | < FLAT CABLE > | | | |
| W103 | 1-784-039-21 | CONNECTOR, BOARD TO BOARD 19P | | | |
| W201 | 1-793-886-11 | CONNECTOR (197-E310-07) | | | |
| W202 | 1-793-887-11 | CONNECTOR (197-E310-14) | | | |
| W203 | 1-793-888-11 | CONNECTOR (197-E310-25) | | | |
| W704 | 1-691-071-31 | HOUSING, CONNECTOR 12P | | | |

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# TAPE PREAMP

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-4428-109-A | TAPE PREAMP BOARD, COMPLETE | | | |
| | | ********** | | | |
| | 1-784-361-11 | JACK (SMALL TYPE) (PHONES) | | | |
| | | < CAPACITOR > | | | |
| C191 | 1-104-665-11 | ELECT | 100uF | 20% | 10V |
| C192 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C483 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C484 | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| C700 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C703 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C704 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C705 | 1-126-176-11 | ELECT | 220uF | 20% | 10V |
| C706 | 1-126-176-11 | ELECT | 220uF | 20% | 10V |
| C707 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C708 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C709 | 1-137-372-11 | MYLAR | 0.022uF | 5% | 50V |
| C710 | 1-137-372-11 | MYLAR | 0.022uF | 5% | 50V |
| C711 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C712 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C713 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |
| C714 | 1-104-665-11 | ELECT | 100uF | 20% | 10V |
| C715 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |
| C716 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C717 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C719 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C720 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C721 | 1-102-981-00 | CERAMIC | 300PF | 5% | 50V |
| C722 | 1-163-128-00 | CERAMIC CHIP | 300PF | 5% | 50V |
| C723 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C724 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C725 | 1-102-112-00 | CERAMIC | 330PF | 10% | 50V |
| C726 | 1-102-112-00 | CERAMIC | 330PF | 10% | 50V |
| C727 | 1-104-993-11 | MYLAR | 0.01uF | 5% | 200V |
| C728 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C729 | 1-137-371-11 | MYLAR | 0.015uF | 5% | 50V |
| C730 | 1-137-367-11 | MYLAR | 0.0033uF | 5% | 50V |
| C731 | 1-137-367-11 | MYLAR | 0.0033uF | 5% | 50V |
| C732 | 1-137-367-11 | MYLAR | 0.0033uF | 5% | 50V |
| C741 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C742 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C743 | 1-137-368-11 | MYLAR | 0.0047uF | 5% | 50V |
| C744 | 1-137-368-11 | MYLAR | 0.0047uF | 5% | 50V |
| C745 | 1-102-125-00 | CERAMIC | 4700PF | 10% | 50V |
| C746 | 1-102-125-00 | CERAMIC | 4700PF | 10% | 50V |
| C747 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C748 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C749 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C750 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C751 | 1-126-160-11 | ELECT | 1uF | 20% | 50V |
| C752 | 1-126-160-11 | ELECT | 1uF | 20% | 50V |
| C753 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C754 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C756 | 1-163-021-91 | CERAMIC CHIP | 0.01uF | 10% | 50V |
| C758 | 1-124-252-00 | ELECT | 0.33uF | 20% | 50V |
| C761 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |
| C762 | 1-126-052-11 | ELECT | 100uF | 20% | 10V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C799 | 1-101-001-00 | CERAMIC | 0.001uF | 50V | |
| C801 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C802 | 1-161-772-11 | CERAMIC | 0.1uF | 10% | 25V |
| C799A | 1-101-004-00 | CERAMIC | 0.01uF | | 50V |
| | | < CONNECTOR > | | | |
| * M193 | 1-564-705-11 | PIN, CONNECTOR (SMALL TYPE) 3P | | | |
| * M194 | 1-564-704-11 | PIN, CONNECTOR (SMALL TYPE) 2P | | | |
| * M701 | 1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P | | | |
| M902 | 1-564-707-11 | PIN, CONNECTOR (SMALL TYPE) 5P | | | |
| M7031 | 1-573-827-11 | CONNECTOR, BOARD TO BOARD 13P | | | |
| * M7032 | 1-766-719-11 | CONNECTOR, BOARD TO BOARD 10P | | | |
| | | < DIODE > | | | |
| D191 | 8-719-031-85 | DIODE 1N4002L | | | |
| | | < IC > | | | |
| IC191 | 8-759-927-82 | IC BA6218 | | | |
| IC701 | 8-759-508-69 | IC BA3126N | | | |
| IC702 | 8-759-261-93 | IC NJM4580LD | | | |
| IC703 | 8-759-363-21 | IC HA12203 | | | |
| JK800 | 8-749-923-04 | IC TOTX178A (CD DIGITAL OUT) | | | |
| | | < COIL > | | | |
| L701 | 1-410-774-11 | INDUCTOR | 8.2mH | | |
| L702 | 1-410-774-11 | INDUCTOR | 8.2mH | | |
| L703 | 1-431-707-11 | TRANSFORMER, BIAS OSCILLATION | | | |
| L704 | 1-410-521-11 | INDUCTOR | 100uH | | |
| | | < TRANSISTOR > | | | |
| Q702 | 8-729-194-57 | TRANSISTOR | 2SC945-P | | |
| Q704 | 8-729-194-57 | TRANSISTOR | 2SC945-P | | |
| Q705 | 8-729-194-57 | TRANSISTOR | 2SC945-P | | |
| Q706 | 8-729-141-83 | TRANSISTOR | 2SB1375 | | |
| Q707 | 8-729-194-57 | TRANSISTOR | 2SC945-P | | |
| Q708 | 8-729-194-57 | TRANSISTOR | 2SC945-P | | |
| | | < RESISTOR > | | | |
| R191 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R192 | 1-249-455-11 | CARBON | 4.7 | 5% | 1/4W |
| R245 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R265 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R266 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R267 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R268 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R269 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R271 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R288 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R289 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R290 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R291 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R295 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W |
| R296 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W |
| R298 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R299 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R485 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W F |
| R486 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W F |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R650 | 1-216-689-11 | METAL CHIP | 39K | 0.5% | 1/10W |
| R651 | 1-216-091-00 | METAL CHIP | 56K | 5% | 1/10W |
| R652 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R701 | 1-216-025-91 | RES,CHIP | 100 | 5% | 1/10W |
| R702 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R703 | 1-216-107-00 | METAL CHIP | 270K | 5% | 1/10W |
| R704 | 1-216-107-00 | METAL CHIP | 270K | 5% | 1/10W |
| R705 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W F |
| R706 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W F |
| R707 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R708 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R709 | 1-216-100-00 | RES,CHIP | 130K | 5% | 1/10W |
| R710 | 1-216-100-00 | RES,CHIP | 130K | 5% | 1/10W |
| R711 | 1-216-068-00 | METAL CHIP | 6.2K | 5% | 1/10W |
| R712 | 1-216-068-00 | METAL CHIP | 6.2K | 5% | 1/10W |
| R713 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R714 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R715 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R716 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R717 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R718 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R719 | 1-216-308-00 | METAL CHIP | 4.7 | 5% | 1/10W |
| R720 | 1-216-308-00 | METAL CHIP | 4.7 | 5% | 1/10W |
| R721 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R722 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W |
| R723 | 1-249-381-11 | CARBON | 1 | 5% | 1/4W F |
| R724 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R725 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R741 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R742 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W |
| R743 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R744 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R745 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R746 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R749 | 1-216-097-91 | RES,CHIP | 100K | 5% | 1/10W |
| R750 | 1-216-109-00 | METAL CHIP | 330K | 5% | 1/10W |
| R751 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R752 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W |
| R753 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R754 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |
| R757 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R758 | 1-247-840-00 | CARBON | 2.4K | 5% | 1/4W |
| R759 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R760 | 1-247-840-00 | CARBON | 2.4K | 5% | 1/4W |
| R761 | 1-247-866-11 | CARBON | 30K | 5% | 1/4W |
| R762 | 1-247-866-11 | CARBON | 30K | 5% | 1/4W |
| R763 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R764 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R765 | 1-216-089-91 | RES,CHIP | 47K | 5% | 1/10W |
| R766 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |

< VARIABLE RESISTOR >

| | | |
|---|---|---|
| VR701 | 1-230-499-11 | RES, ADJ, CARBON 100K (REC LEVEL L) |
| VR702 | 1-230-499-11 | RES, ADJ, CARBON 100K (REC LEVEL R) |
| VR703 | 1-230-497-11 | RES, ADJ, CARBON 22K (PB LEVEL L) |
| VR704 | 1-230-497-11 | RES, ADJ, CARBON 22K (PB LEVEL R) |
| VR705 | 1-230-495-11 | RES, ADJ, CARBON 2K (REC BIAS L) |
| VR706 | 1-230-495-11 | RES, ADJ, CARBON 2K (REC BIAS R) |

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| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | 1-676-335-11 | TOUCH SENSOR BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C601 | 1-163-239-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| | | < RESISTOR > | | | |
| R601 | 1-216-049-91 | RES,CHIP | 1K | 5% | 1/10W |

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| | | |
|---|---|---|
| | MISCELLANEOUS | |
| | ********** | |
| 51 | 1-693-407-12 | TUNER (US,CND) |
| 51 | 1-693-408-12 | TUNER (EXCEPT US,CND) |
| ⚠54 | 1-555-750-11 | CORD, POWER, EULO PLUG (AEP,MY,SP,HK,KR,TW) |
| ⚠54 | 1-783-531-51 | CORD, POWER (US,CND) |
| ⚠54 | 1-696-966-31 | CORD, POWER (AUS) |
| ⚠54 | 1-751-535-11 | CORD, POWER (UK) |
| ⚠63 | 1-770-019-11 | ADAPTOR, CONVERSION PLUG 3P (HK) |
| 104 | 1-791-958-11 | WIRE (FLAT TYPE)(15CORE) |
| 117 | 1-791-959-11 | FFC (184-F312F5508),12P |
| 121 | 1-418-482-11 | ILLUMINATION BLOCK, LED |
| 151 | 1-772-264-11 | DECK, MECHANICAL |
| ⚠201 | 8-848-289-31 | DEVICE, OPTICAL KSS-331A (RP) |
| M901 | X-4952-489-1 | MTR MAIN BLK ASSY(CAPSTAN/REEL) |
| M902 | X-2625-171-1 | MOTOR ASSY (SLED) |
| M903 | X-2625-911-1 | MOTOR ASSY (TT) |
| S501 | 1-771-871-11 | SELECTOR, VOLTAGE (202-L16-12A) (MY,SP,KR,TW,HK) |
| S901 | 1-762-571-11 | SWITCH |
| ⚠T501 | 1-435-254-11 | TRANSFORMER, POWER (200-99Y0282) (AEP,UK,HK,AUS) |
| ⚠T501 | 1-435-317-11 | TRANSFORM, POWER (200-99Y0283) (US,CND) |
| ⚠T501 | 1-435-256-11 | TRANSFORM, POWER (200-99Y0320) (MY,SP,KR,TW) |
| Z201 | 1-793-885-11 | INDICATOR TUBE,FLUORESCENT |

**********

| | | |
|---|---|---|
| | ********** | |
| | HARDWARE LIST | |
| | ********** | |
| #1 | 7-685-246-19 | SCREW + KTP 3x8 TYPE2 SLIT |
| #2 | 7-685-547-19 | SCREW + BTP 3x10 TYPE2 N-S |
| #3 | 7-685-534-19 | SCREW + BTP 2.6x8 TYPE2 N-S |
| #4 | 7-621-775-10 | SCREW + B 2.6x4 TYPE2 N-S |
| #5 | 7-685-546-19 | SCREW + BTP 3x8 TYPE2 N-S |
| #6 | 7-623-553-88 | SCREW, PRECISION + P 2x7 |
| #7 | 7-627-554-28 | SCREW, PRECISION + P M2x5 TYPE1 |
| #8 | 7-685-105-19 | SCREW (2x8) ,TAPPING (B) |
| #9 | 7-685-104-19 | SCREW (2x6) ,TAPPING (B) |
| #10 | 7-627-852-18 | SCREW, PRECISION + P 1.7x4 TYPE3 |
| #11 | 7-627-852-17 | + P 1.7x4 |

**9-929-025-11**
(SP)
*48*

**Sony Corporation**
**Home Audio Company**

99I0985-1
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# SS-CED2U

# SERVICE MANUAL

*US Model*
*Canadian Model*

This set is the speaker system in CMT-ED2U.

## SPECIFICATIONS

| | |
|---|---|
| Speaker system | Full range bass-reflex type |
| Speaker units | 10 cm (4in) dia.,cone type |
| Rated impedance | 8 ohms |
| Dimensions(w/h/d) | Approx, 195 x 205 x 120 mm<br>($7\ ^3/_4$ x $8\ ^1/_8$ x $4\ ^3/_4$ in) |
| Mass | Approx. 1.3 kg (2 lb 14oz.) net per speaker |

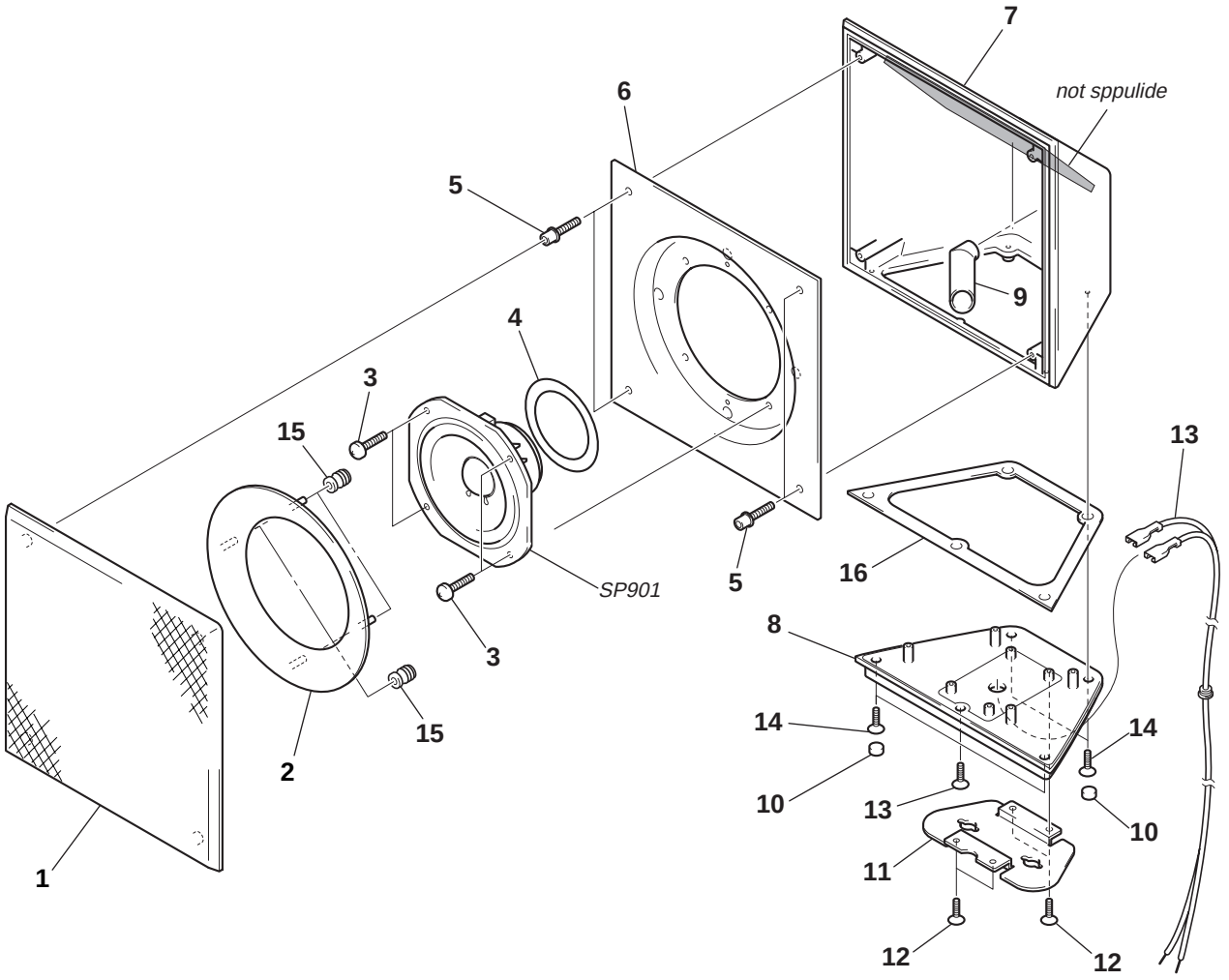
## SPEAKER SYSTEM

MICROFILM

SONY

## EXPLODED VIEW AND PARTS LIST

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-4952-557-1 | CLOTH FRAME ASSY(BLUE) | |
| 2 | 4-226-262-01 | SKP RING | |
| 3 | 4-226-253-01 | MACHINE SRW M4x10 BLK BIND | |
| 4 | 4-226-263-01 | EVA PACKING | |
| 5 | 4-226-256-01 | PIN SCREW(HROME) | |
| 6 | 4-226-257-01 | SPK BAFFLE | |
| 7 | 4-226-260-01 | SPK BOX | |
| 8 | 4-226-259-01 | SPK BTM COVER | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 9 | 4-226-261-01 | DUCT | |
| 10 | 4-226-252-01 | SPK FOOT | |
| 11 | 4-226-258-01 | SPK WIRE HOOK | |
| 12 | 4-226-254-01 | SRW P-TITE M3x10CHROME-F | |
| 13 | 1-791-969-11 | CORD(180-CSA-ED2) | |
| 14 | 4-226-255-01 | SRW P-TITE M3x14CHROME-F | |
| 15 | 4-997-391-01 | CATCHER | |
| 16 | 4-226-265-01 | BTM PACKING | |
| SP901 | 1-529-548-11 | SPEAKER(X40538HRX20K-00) | |